FOR BUSINESS OFFICIALS OF COLLEGES · UNIVERSITIES & RESIDENT ACADEMIES

College and University Business

APRIL 1953: Broad Gauged Administration ★ Financing Pensions Properly ★ Practical Inventory Control ★ Estimating Enrollment for Budget Use ★ Study of Building Costs ★ Food Portion Control

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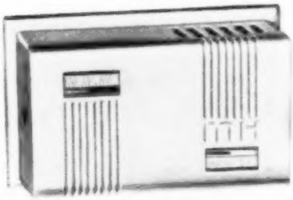

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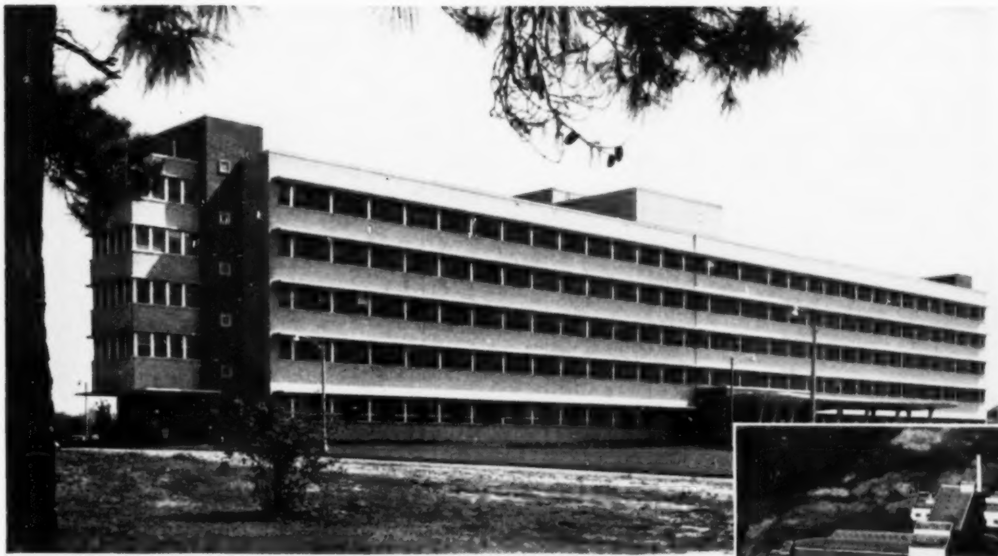
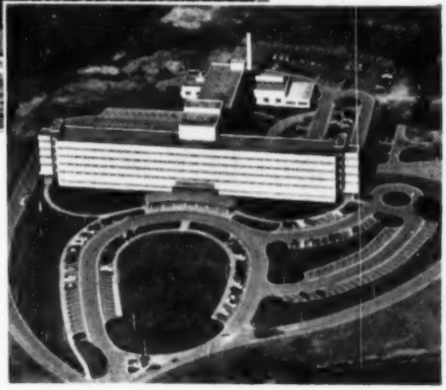


Photographs by THIGPEN



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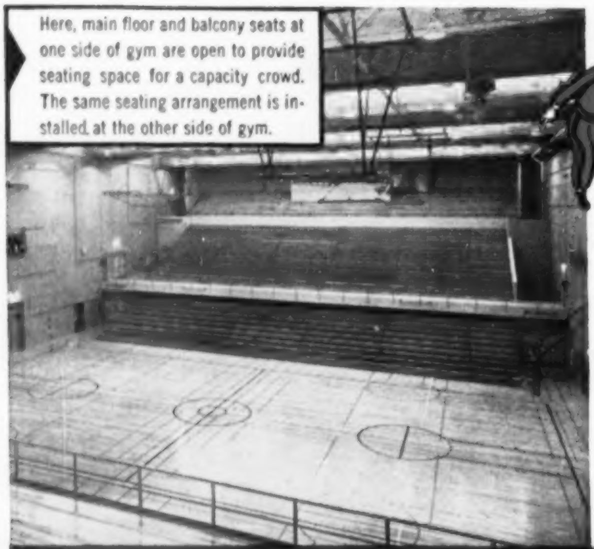
upled with the many innovations in this notable hospital are a great many superior products, such as SLOAN *Flush* VALVES, famous through more than 40 years for efficiency, endurance and economy. Here is more proof of preference that explains why . . .



Here, main floor and balcony seats at one side of gym are open to provide seating space for a capacity crowd. The same seating arrangement is installed at the other side of gym.

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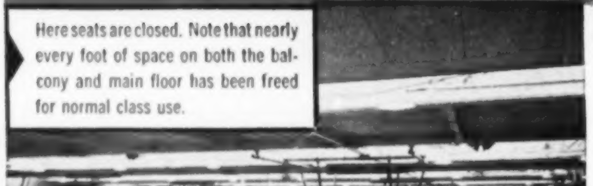

Here seats are closed. Note that nearly every foot of space on both the balcony and main floor has been freed for normal class use.

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College and University Business

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Vol. 14, No. 4, April 1953

APRIL 1953

FEATURE ARTICLES

Among the Authors

C. A. Schoenfeld

Clayton A. Schoenfeld, director of editorial services and journalism at the University of Wisconsin, presents his concepts on public relations from the campus administrator's point of view. While his experience at Wisconsin is sharply reflected in his article on page 19, it may be more accurately said to be based on observations he made at 16 colleges and universities recently visited. Last year Captain Schoenfeld was on leave at the Office of the Chief of Army Field Forces, engaged in army-school liaison work. He was stationed at Fort Monroe, Va., but returned to Wisconsin the first of the year. Commenting on the article, he states: "I have studiously avoided use of the term 'public relations' except in a single instance, knowing full well that the label carries certain invidious connotations, at least so far as many educationists are concerned."

A. A. Weinberg

A. Albert Weinberg, consulting actuary of the University Retirement System of Illinois, points out on page 23 the procedures to be followed in financing the obligations incurred when colleges and universities establish pension systems for faculty and staff. A well known authority in the field, he has conducted actuarial and related studies and developed pension plans for the Insular Government of Puerto Rico, seven states, four cities, and a host of governmental units. Mr. Weinberg is actuarial consultant for many public funds in Illinois and also is a consultant for the employes' retirement system of Rhode Island and for the employes' retirement fund of Wichita, Kan. Author of many books and bulletins on public employe retirement and pension plans, he also is on the executive board of the Municipal Finance Officers Association and is a member of many professional and civic organizations.

Michael M. Hare

Michael M. Hare, consulting architect for the Association of College Unions since 1940, describes on page 32 the preliminary thinking and planning that went into the design of the new union building at Valparaiso University in Indiana. This project presented an unusual opportunity to study the needs of an institution for a union building within the budget available, and might well suggest to other institutions a modus operandi when planning union buildings or, indeed, structures of other types and for other purposes.

W. Gerard Banks

W. Gerard Banks, bursar of the College of Puget Sound in Tacoma, Wash., reports (*p. 30*) on the studies made of enrollment figures at his institution in order more accurately to project the school budget. Before accepting his present post in 1946, Mr. Banks served for two years as assistant to the president of Centenary College in Louisiana, following four years as bursar and 13 years in the mathematics department. Mr. Banks is a frequent contributor to the literature of college business administration.


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Questions and Answers

Protecting Personal Effects

Question: What protection is provided, and what responsibility assumed, for student property in and out of school terms?—L.K.T., Ohio.

ANSWER: We carry a limited amount of personal effects fire insurance (averaging $300 per student for girls and $200 for men), which applies in cases where loss is not covered by floater protection under parents' home contents fire insurance policy, for any personal effects in our dormitories at any time.

All student rooms have locks and students are instructed to keep rooms locked at all times. Occasionally, where moving personal effects would be extraordinarily inconvenient, a student is allowed to leave a packed trunk in a trunk storage room, which is always kept locked.

No responsibility is assumed at any time, but if a student's property is damaged through an act of willful negligence or carelessness by an employe, a financial settlement is made to the student.

During vacations no responsibility is assumed, but a manager or watchman is about the dormitories for general protection.—T. M REHDER, *director of dormitories, State University of Iowa.*

Delinquent Accounts

Question: What seems to be the general practice among colleges in the collection of unpaid charges from students who have left school?—B.F.L., Mont.

ANSWER: The University of Florida has made considerable progress in the last two years in collecting delinquent student accounts. A policy was recommended and adopted of not permitting students to register if they had delinquent accounts from previous attendance at the university. This has resulted in the collection of many small accounts and in students' making positive arrangements to take care of any major indebtedness that might still be outstanding.

In the second place, we have adopted a policy of not issuing diplomas or furnishing transcripts of credits for students who have delinquent accounts. Because of the very active use of credit transcripts as a medium of information, this method has been most effective.—GEORGE BAUGHMAN, *business manager, University of Florida.*

After-Hour Supervision

Question: How can the use of buildings by students after normal closing hours be properly supervised?—L.S., Mass.

ANSWER: Departments that occupy buildings should be held responsible for the control of keys and the scheduling of working hours within the various portions of the buildings. In most laboratories, undergraduates are not permitted to use facilities after specified hours. Graduate students and some research personnel may be given special permission to work in assigned areas and an attempt made to limit them to these areas by a rigid control of keys.

One of our colleges that has extensive laboratory equipment is very particular that under no conditions may an individual work alone in the laboratories. This includes faculty, employes and all student classifications. There must always be a second person, who, in case of an emergency, can take action. Other departments assign proctors and schedule laboratory hours under supervision.

No building space should be available to students outside of established schedules and these scheduled times should be under the supervision of some department or employe group, such as libraries and study rooms. We require anyone found in a building out of scheduled hours to show a permit from the department chairman responsible for that area. Possession of a key does not necessarily grant permission, as we have found that use of the keys is frequently abused.—LAWRENCE SWEENEY, *superintendent of buildings and grounds, U.C.L.A.*

If you have a question on business or departmental administration that you would like to have answered, send your query to COLLEGE and UNIVERSITY BUSINESS, 919 North Michigan Avenue, Chicago 11, Ill.

"Lost and Found" Money

Question: What is the proper way of accounting for money (coins more often than currency) which is turned in to the business office as "lost and found"?—S.M.J., Wis.

ANSWER: First, consider what *not* to do with it. I have seen many situations where a petty cash fund is allowed to accumulate in a separate cash drawer, cigar box, or sack, without records. Because the amounts of cash-drawer overages, stamp sales, or "lost and found" items are small, the natural inclination is to pay little attention to them.

But this practice can have embarrassing results. It takes only one case of "lost identity" of funds, even though the amount is small, to give the college cashier a bad name, especially if the student or citizen involved is looking for something to criticize.

The petty cash fund indicated here can be justified only *if* every cent is recorded in a permanent subsidiary cash book or small memorandum record that is available at all times. The place, date and hour should be indicated whenever any money is found, and certainly the name of the person who turned it in should be recorded.

At predetermined intervals (1) the amounts "found" should be returned to the finder (with his receipt signature recorded in the cash book), or (2) the total petty cash should be placed in miscellaneous income, with a regular general funds receipt issued for it. The receipt number should, of course, be recorded in the petty cash memorandum book.—CHARLES HOFF, *vice president, University of Omaha.*

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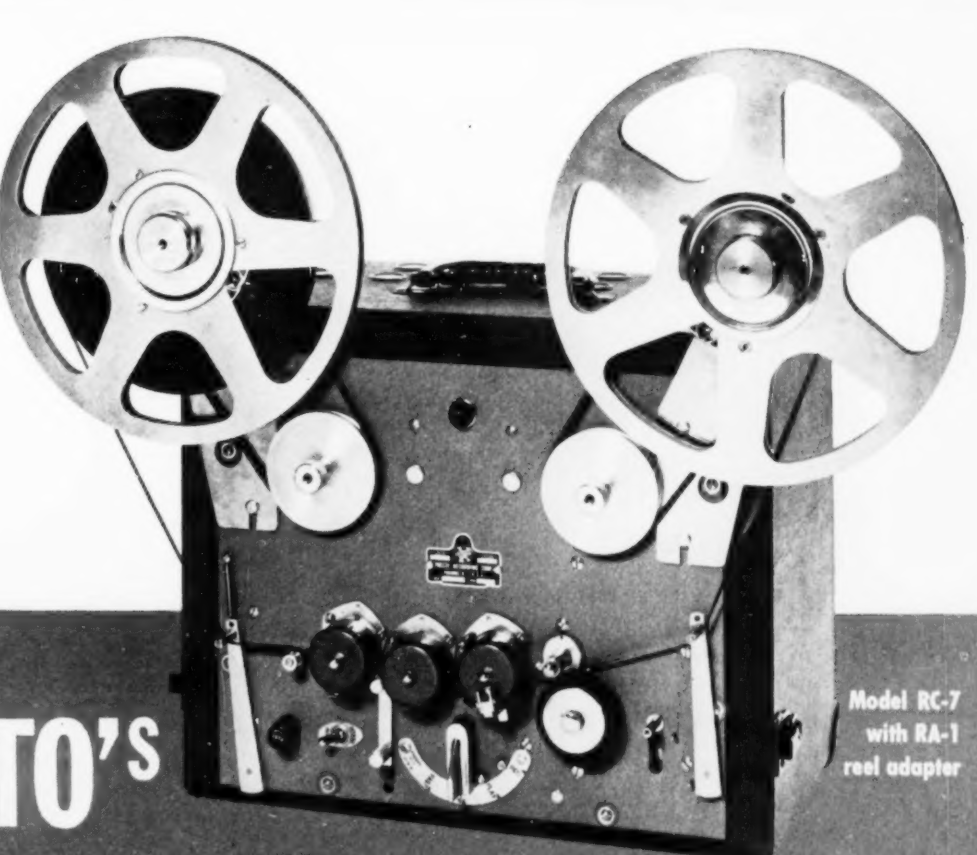

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NELSON JONES
Director of Memorial Union, University of Maine

A READING OF PUBLICATIONS, A LOOK AROUND my own campus, and visits to other colleges leave the strong impression that the people who are concerned with college unions must give careful attention to the impact of the new college residence hall on the position of the college union and the broad policies and operational technics that should direct its destinies during the next two college generations.

Worthy of amplification is the proposition that as colleges provide more and varied facilities in dormitories, and as they distribute their student populations into smaller housing units each complete unto itself, the more the college union, the services it should perform, and the basic policies governing its operation are affected. Also, the more the student body tends to be separated into insular, stratified and socially limiting units that restrict rather than broaden the college experiences of its students, the more important it is for the union to assist in the integration of the student body. This growth of the dormitory might be described as being centrifugal in its force, that of the union centripetal, with each having a justifiable function.

The college dormitory is being equipped more and more to take care of the personal needs of the student. Dormitories are becoming complete college residences provided with extensive facilities, carefully selected furniture, and good decoration. No longer is the building planned only for sleeping accommodations. Each has its lounge, its recreation room, and in many instances its dining room. More than that, there appears to be a tendency to have these units set up for reasonably small segments of the student body. Within the next decade most students in residence will have in their college residences facilities for most of their personal needs, a place where requirements for sleeping, eating, loafing, playing and reading will be conveniently and constantly available.

Concurrently college union buildings are being dedicated, constructed and planned all over the country. In many instances they have been patterned after older buildings. Unions on other campuses are being studied and gains from the errors of others will result. More and more the union is becoming a refined product, a structure that has taken some features from one union and other facilities from other buildings. Certain features have been rejected and, by natural processes, refinements or modifications have resulted. However, to what extent they are being designed by looking to the past rather than to the future is a real question.

It is my opinion that for the future, the lounge, the provision for regular meal service, and the library or browsing room and even the ballroom may assume a position of lesser importance in the college union. Each of these features will continue to be required, but the extent and need will vary inversely with the percentage of students in residence.

New residence halls are being increasingly staffed by counselors, proctors, tutors and, in some instances, deans whose prime responsibility is to be familiar with and to assist in improving the life of the student. They will facilitate the development of student councils in the dormitory; they will encourage the occupants to become active in the social and recreational life of the dormitory, and finally they will have a detailed knowledge of many individuals with their eccentricities, their backgrounds, and their interests.

On the surface this trend may appear to be in direct opposition to and in competition with the methods and objectives of the college union. Such is not the case. If the college unions are more concerned with the students' communal interest and will provide those facilities and activities essential to the complete community center, and the residence units become more and more concerned with the personal or individual aspects of their students it then follows that the college union and the residence unit should complement each other.

As this concept is developed the union can become an even greater integrating force. It can get into the very heart and soul of the university, namely, the student body, learn what makes it go, and understand better the great variety of forces that play on the individual. The college residence can become less a competitor and more a companion in the dramatic job of helping the student to a full experience in college and in his life thereafter.

Looking Forward

Empire Building

MANY OF THE PROBLEMS OF ADMINISTRATION CAN be ascribed to ambitious empire builders on a college campus. The good of the whole is ignored in the drive to obtain status for the individual or the department.

So bitter and strenuous is this tug-of-war between administrators on some campuses that it is difficult to realize that they're all supposed to be playing on the same team. The purchasing department throws its weight around with departments heads on the faculty, residence hall directors vie with directors of union buildings, and the buildings and grounds department feels it gets a bum steer from top administration. Is it any wonder that misunderstandings develop?

In part, this friction can be attributed to top administration's failure to define specific areas of responsibility in regard to the functions of each office as it relates to the others. This delineation of function is a fundamental tenet of administration—unhappily often ignored.

Empire building may satisfy the ego of the practitioner but it is hardly conducive to institutional progress. If the offenders won't perform as a team, maybe it would be wise for them to spend some time on the bench to cool off.

Two Bobs

THE COLLEGES OF AMERICA HAVE BEEN FORTUNATE in having one of their most effective administrators representing them in the negotiations involved in drawing up amendments to the G.I. bill under Public Law 346 and Public Law 16. Dr. Robert B. Stewart, vice president and treasurer of Purdue University, served as chairman of the Veterans Administration's advisory committee on education and training under the G.I. bill through the period when the bill was being amended and later steered the promulgation of the first and basic regulations under Public Law 550.

During Bob Stewart's tenure as chairman, the federal government has dispensed some thirteen billions of dollars for veterans' education and subsistence. Bob was on the alert to see that the V.A. procedures evolved were consistent with the objectives of higher education and at the same time served as a sharp and caustic critic of college administrators who attempted to put one over on Uncle Sam. His candor ruffled the delicate feathers of some, but his integrity commanded the respect of all. With a few more gray hairs but still with a whole skin, Mr. Stewart has resigned the chairmanship of the administrators' advisory committee on education and training but will continue as a member of the committee. As its new presiding officer the committee will have another Bob, as Robert G. Sproul, president of the University of California, takes over as chairman when the committee meets this month. No shrinking violet, either, the California Bob is expected to carry on the vigorous tradition of the Purdue Bob.

Here We Go Again

SPRING IS IN THE AIR, AND A RASH OF CONVENTIONS is breaking out all over. Some conventions will be worth while, others will be a waste of time.

The question is: What do you do about them? Is it always the top administrator who attends the meetings—particularly if the convention is scheduled at a scenic and exotic locale—or do others get a chance? What organized procedure is followed for rotation of administrative personnel as representatives of the institution at conventions? What advance briefing of attendees is made, and how complete are the reports required of those who attend?

The annual meeting or convention of a professional group should offer opportunities for professional growth. If it doesn't, some other device should be offered in its place. Certainly a warmed-over version of last year's convention is not going to contribute much to anybody's improvement. Conventions need careful planning to provide for all segments of the membership. Small college administrators are often left out in the cold, both as to program offerings and as to invitations to participate as speakers.

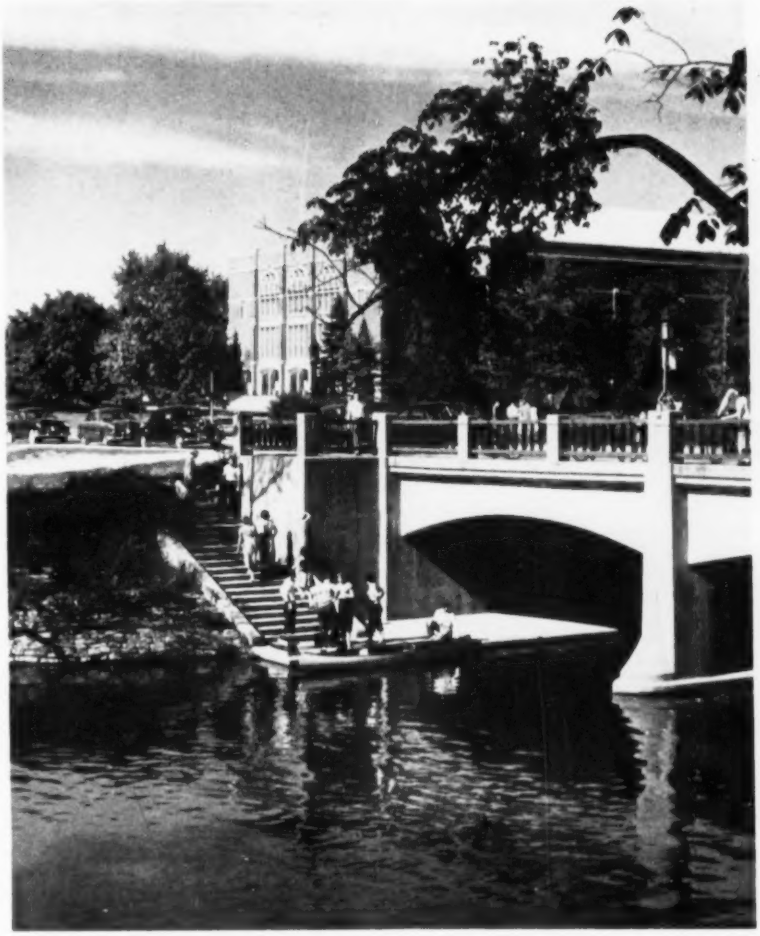
It's expensive for people to travel long distances to a convention. Their time should not be wasted with too many blank spots for free time, as a convention is not a holiday from campus.

For other convention observations, please turn to pages 28 and 29.

This Is Administration?

FROM TIME MAGAZINE'S OBITUARY: "STALIN WAS AN administrative genius. . . . It took skill to pick devoted men, to enlist their talents while subduing their ambitions, to reward or discard, flatter or blackmail, soothe or scourge, at the necessary moment. Stalin governed by a cunning balancing of tensions, and was himself aloof and unhurried."

One of the five principal university perspectives is that of student welfare. The undergraduate in his off hours is a vital facet of university administration.



PERSPECTIVES

Today's academic problems call for broad gauged administration

CLARENCE A. SCHOENFELD
Director of Editorial Services and Journalism
University of Wisconsin, Madison

CAUGHT APPARENTLY INEXORABLY between the upper and nether millstones of relatively increasing responsibilities and relatively declining revenues, the colleges and universities of America today have only one recourse: to conduct their affairs with such acumen that the time-tested values and objectives of broad and deep higher education will at once be served along with the development and maintenance of the public interest, good will, and support.

In the attack on such a multiple problem, American higher education can field a multiple organization, each component of which has developed through the years its peculiar assets for independent action and mutual support—boards of trustees, faculties and administrators. Without vigorous participation on the part of regents and professors in the university administrative process, no institution of higher education can expect to move ahead steadily and surely.

Notwithstanding the vital rôles to be played by faculties and regencies strong in integrity and initiative, however, the catalyst of campus conduct remains the administrator, be he president, chancellor, vice president, dean or director. He it is who is being called upon—in day-to-day operational judgments and in long-range fundamental recommendations—to establish and maintain an azimuth leading toward greater institutional efficiency, effectiveness and affluence.

To his key assignment, the college administrator must bring three basic characteristics: a sound standard of values, wise judgment, and pronounced leadership ability. He must be an expert not only in each aspect of campus life but also in the interworkings of the component parts. As Woodrow Wilson once suggested, nobody specializes in the relations of things. Yet this is just what the university administrator must do. His must be that sense of perspective, that feeling for the verity of the part and for the relation of parts to one another and to the whole. In short, the successful university administrator is a campus ecologist, not a mere taxonomist.

True enough, a campus administrator could make a relatively simple matter of running a college or university if he could lay up against every administrative problem a single, invariable rule of thumb and thereby confidently measure off a decision guaranteed to rate A-plus in impact and effect. There is some evidence that occasional campus administrators try to play this elementary a game. To each question wanting an answer they seemingly propose one same criterion, such as, say, "What is the cheapest

way?" and then wonder why the roof caves in.

The hard fact is that the successful operation of an institution of higher education is anything but a simple matter and cannot be made simple. The campus administrator lives and works in a goldfish bowl; every campus problem is exposed to a complex of interests and angles, some of them intersupporting, some quasi-conflicting, some mutually contradictory, each of them significant to somebody, all of them meriting a degree of consideration. To approach any campus decision from a unilateral point of view is to court failure. Indeed, if any single rule of university administration can be evolved, it is this: that only by a continual balancing of many perspectives can a president or a dean achieve success.

Sixteen Key Perspectives to Be Used in Making Administrative Decisions

The Student
- Teaching
- Student Welfare

The Professor
- Research
- Ethos

The Trustees
- Housekeeping

The Public at Large
- Public Service

The Family Groups
- Parental Rapport
- Alumni Loyalty
- Employe Esprit
- Professional Acceptance
- Community Relations

CONSCIOUS OF VARIED VOICES

This is not to suggest that in charting its course a college or university may not weigh certain chosen perspectives more heavily than others. Nor that in order to be useful a community of scholars must be all things to all men. Nor that coincident with seeking to raise funds a president must compromise and equivocate. It is to say that wherever you find an outstanding college administrator you will find a man who is deeply conscious of the varied voices speaking to him their special versions of each campus function and policy. In short, in the jargon of the trade, the successful campus administrator is an expert in internal and external public relations in the best sense of the terms.

The college/university perspectives with which the campus administrator must be so abundantly familiar will vary in multiplicity, detail and intensity from institution to institution, of course, but their general pattern will be remarkably similar throughout the country. To reduce them to a type check list is, perhaps, to oversimplify the comprehension attendant to their selection by any particular administrator and the nuances implicit in their various applications. But such a universal list can, at least, serve as a rudimentary starting point from which each administrator can pinpoint the perspectives best suited to encompass the status and the rôle of his particular institution.

There will be nothing mysterious in a list of academic perspectives. As terms they are distinguished by what might almost be called their triteness. Perhaps it is this very obviousness that can lead to their being ignored, or treated cavalierly, at critical moments.

What can we say are these great, overriding considerations in university administration? *Newsweek* recently attributed to Harvard's President Conant the belief that the hallmarks of a great university are solvency, good students, and good faculty. Cutlip and Center, in their new treatise on public relations, describe the situation in related if somewhat glibber terms by saying that university problems center around funds, freedom and freshmen. Traditionally, large American universities have come to think of themselves as being engaged primarily in the three general functions of teaching, research and public service; or, to introduce an alliteration of our own, in instruction, investigation and investment.

Certainly we can say that, speaking anatomically, the five principal university perspectives to be viewed from the administrator's chair are the student, the professor, the trustee, the public at large, and the "university family" groups. Speaking physiologically, key perspectives may be considered to be teaching, student welfare,

Two physiologists remove thyroid glands from white rats that had previously been injected with radioactive iodine. The perspective of research is the university administrator's concern.

research, ethos (the gamut of the fundamental spiritual characteristics of campus culture), public service, "housekeeping" (the range of managerial functions), community relations, parental rapport, alumni loyalty, employe esprit, and professional acceptance.

Phasing these approaches together, we get this ecological outline:

These perspectives are obviously not co-equal; some are wider in scope or more profound than others. Some are in a sense superficial; others are so involved as to defy ready definition. Many are interlocking. Nor is the list necessarily complete. Above all, the list is not automatically applicable to a single institution. For if perspectives are to have any true validity, they must be indigenous—that is, they must be "at home" on their campus.

The president of a small, church-related college, for example, will certainly place near the head of his list of family-group perspectives the denomination with which his school is affiliated, while the dean of a land-grant college will undoubtedly give precedence to the perspective of agricultural extension. In its total as a working outline, however, this summary of 16 perspectives offers a relatively reliable guide against which an administrator can check the extent to which his approach to institutional management is a balanced approach.

As we have said, the analysis of every campus problem requires the bringing to bear of numerous perspectives, if the resulting decision is to be marked by the optimum in both intrinsic soundness and public appeal. Admittedly, not all of the 16 perspectives suggested here are pertinent to each and every academic challenge. Nonacademic employes will typically have little, if any, relationship, for example, to a curricular question, and fundamental research problems will seldom be affected by considerations of community relations. But the striking attribute of successful college/university administration is the degree to which most or all of these 16 perspectives *are* brought into play in the formulation of the majority of campus decisions. The burden of proof always will be on the administrator to show why a particular perspective is *not* applicable to a problem under discussion.

Let us see how an administrator might utilize the check list in facing a representative campus project, such as planning a new science hall. Among the questions he would raise are these:

The Student. Will the building be located in the student stream? Have appropriate students been asked for suggestions and recommendations?

Teaching. Will the building include space and facilities designed to improve the effectiveness of undergraduate instruction?

Student Welfare. Will the building provide corridors or lounges for smoking, chatting and "cokes"?

The Professor. Will recruitment and retention of able faculty be aided by office space, library and laboratory facilities? Is the hall being built at the expense of salary raises? Are other departments and schools satisfied they are not being forgotten?

Research. Will the building have space and facilities for advanced research? How about graduate-student laboratories? Will its location facilitate "cross-fertilization" with related departments?

Ethos. Is the scope of the project in keeping with campus traditions of comparative emphasis between the liberal arts and the sciences? Does the project do justice to present opportunities in the field of science? Is the concept true to the institutional mission?

The Trustee. Is the board of trustees abreast of the project and in full accord? Have other necessary officials given their stated or tacit approval?

Housekeeping. Are we getting a dollar's worth of building for every dollar spent? Are the contractors reliable? Can we cut any construction corners without jeopardizing performance? Will utility lines extend economically to the site? By modifying a point of emphasis, can the project be "sold" to a donor?

The Public at Large. Will the hall include a lobby where the story of university research can be told through appropriate displays? Is the press fully informed of the steps being taken, and why?

Public Service. Will the building include public-service testing laboratories and conference rooms? Will the building have a direct appeal to the "customer" organizations and groups?

A county agent talks to a grassland field day crowd of farmers. The perspective of public service has come to be of heavy concern to administrators of our colleges and universities.

Main Street abuts on the college campus, and the university administrator more and more must concern himself with community relationships.

Family Groups. Will the building form an integral part of the physical plant, today and tomorrow?

Parental Rapport. Will the building compare favorably in the eyes of prospective students and their parents with comparable structures at competing schools?

Alumni Loyalty. Will alumni be proud of the development? Does its location destroy a nostalgic view?

Employe Esprit. Are the latest janitorial devices included?

Professional Acceptance. Are the standards of accrediting agencies being met? Will the project conflict with, or supplement, similar regional enterprises?

Community Relations. Does the location fit in with community development plans? Is off-street parking provided?

A FEASIBLE SCORE CARD

Once he has laid these and many other related considerations on the table, it will be the rare administrator indeed who is in a position to meet all of them fully. Despite its obvious value in terms of teaching, research and faculty esprit, an expensive type of microscope may have to be cut out because of overriding economy requirements.

Morale doldrums in English department members may be assuaged only by their being promised increased space in the old science building. Integrity of traditional campus design may dictate that the proponents of advanced architecture go disappointed. Obligations to undergraduates may rule out space for testing laboratories. Community relations may have an effect on a location otherwise desirable. The requests of a voluble local pressure group may have to be balanced against the comprehensive standards of the U.S. Public Health Service. And so it will go.

Out of this seeming welter of slants and situations the administrator will fashion a feasible score card. Thanks to his many perspectives he may often be confused as to where and when to go, win, place or show, but he won't miss many bets completely. He will give due weight both to those internal standards without which a campus becomes a service station peddling watered gas, and to those external considerations that project the seminar into Main Street.

There is a pitfall in this multi-perspective technic of administration. Should the university executive become so engrossed in collecting, collating, interpreting and evaluating his various data that he needlessly delays making the inevitable final judgment, the system becomes a drag rather than a boon. The best is sometimes the enemy of the good. An adequate plan, carried out with dispatch today, frequently can be more effective than an ideal plan debated and distilled until the moment for optimum action is past.

There is no secure place in academic administration for the president or dean who repeatedly marches boldly up to the hour of decision and then turns and flees. Perspective must not be allowed to become a synonym for postponement. On the other hand, there is no secure place for the administrator who consistently makes snap judgments distinguished only by the speed with which they are rendered; the very machinery of the multi-perspective technic will mitigate against this error.

Obviously, utilizing the administrative principle of multiple perspective solves no problems in and of itself. In effect, it raises issues. Its conscientious use puts permanent burrs under swivel chair saddles. Yet this is its very strength.

ACADEMIC BALANCE ASSURED

Resolutely applied, the multi-perspective technic of administration protects the college/university executive against those narrow-gauge decisions that on the one hand can fail to do justice to the professional principles that undergird every institution or that on the other can spike the reservoirs of public understanding from which higher education must constantly draw inspiration and support. Practiced with sincerity and discretion, the multi-perspective principle assures academic balance—not necessarily a balance of structural and functional quantities, since this may be neither possible nor desirable, but certainly that balance of structural and functional qualities that must increasingly mark institutions of higher education as they seek those adequate resources of mortar, mind and heart with which to meet expanding obligations and opportunities.

PROPER FINANCING OF PENSIONS

Actuarial reserve method is appropriate means of measuring pension obligation

A. A. WEINBERG
Consulting Actuary
University Retirement System
University of Illinois

THE FINANCIAL OUTLAYS OF STATES and local governments to retirement systems have shown a persistent upward trend during recent years. Revenue requirements of the systems have been steadily increasing. Notwithstanding larger appropriations and increases in member contributions, the unfunded liabilities of these systems have been tending upward.

The factors chiefly responsible for this condition are: (1) increases in benefits and liberalization of formulas to meet economic changes without appropriate provision for required revenues; (2) upward salary adjustments to meet cost of living standards without a corresponding provision for the larger dollar pension cost; (3) reduced interest earnings on invested assets; (4) lower mortality among pensioners; (5) increases in pensions to retired employes without full financing thereof; (6) reduced turnover in employment, and (7) an increase in coverage to include larger numbers of employes owing to the expansion of governmental functions. Moreover, the failure of governmental agencies in former years to appropriate the full actuarial requirements of their retirement systems has resulted in the accumulation, in some cases, of large unfunded obligations.

With the continued operation of the federal social security program, the factor of financing local retirement systems has assumed greater importance because of the tendency to compare the low rates of contribution under social security with the higher rates of contributions to such systems. It is not generally recognized that social security reflects a modified cash basis of financing, whereas local systems are predicated upon the basis of meeting the pension cost as it accrues. Under social security, pension payments will be met out of taxes collected at the time these payments are disbursed, whereas the local retirement systems are designed to pay pensions out of reserves created during the active service of those retired.

The method of financing local retirement systems in accordance with actuarial reserve principles has been challenged in many quarters principally because of the necessity for seemingly burdensome appropriations on the part of local governments at the present time, although the normal requirements are generally of moderate amount in comparison with the current pay roll of the employes.

It is the purpose of this article, therefore, to present the important factors and principles inherent in the financing of the pension obligation to the end that a better understanding of the true nature of pension cost may be created. A systematic method for meeting this cost in the most convenient and most economical manner is suggested herein for adoption by local governments as a part of their current financial policy.

PENSION COST

The true cost of pensions to government represents the difference between the financial allocations to the pension fund and the savings to the employer resulting from the operation of the plan. These savings are both of a tangible and intangible character.

Every governmental agency is faced with the accumulation of aged and disabled employes who are retained on the pay rolls in a quasi-emeritus ca-

It is not generally recognized that social security reflects a modified cash basis of financing, whereas local systems are predicated upon the basis of meeting the pension cost as it accrues

pacity because of their long and faithful service. While many such employes may be performing at only a fraction of normal efficiency, there is a disinclination, for humanitarian reasons, to discharge them. In many instances, the retirement of these employes would result in their duties being absorbed by the remaining employes within the particular occupational classification or in their replacement by younger men at lower salaries who would perform at full efficiency. This means a direct saving in pay rolls. Other benefits accrue to government from the operation of a pension fund, such as improved employe morale because of the security provided by the plan, increased over-all efficiency of the service, and stabilization of employment.

APPRAISING TRUE COST

The financial outlay toward the pension fund is partially offset by the gains resulting from these factors. The true cost of a pension fund is not always clearly understood because of the difficulty of evaluating all such factors in monetary terms and establishing the offsetting gains to the employer. In appraising the true cost of a pension plan, however, it is necessary to balance all benefits that accrue from its operation against the dollar expenditures applicable to the plan.

PENSION OBLIGATION

The pension obligation under a pension fund consists of the proportionate pension credits earned by the employes for services rendered. When an employe attains the prescribed minimum age for retirement and has fulfilled all other qualifying conditions, there must be on hand at such time sufficient money to pay the pension earned by the employe for his assumed average future lifetime. The combined credits of all such eligible employes, plus the proportionate credits earned by employes who have not fulfilled the prescribed qualifying conditions, and the aggregate reserve requirements on account of persons already in receipt of pensions, constitute the full pension reserve obligation. This represents the actuarial reserve.

In retirement systems where contributions made in former years were inadequate and below the actuarial requirements, the unfunded accrued liabilities have shown continuous increases. In some systems these are of substantial amount. Public officials having to do with the financing or supervision of these systems frequently point to the increases in the accrued obligation as the measure of increase in the cost of financing current pension credits. This is incorrect and reflects a misconception of the true character of the unfunded accrued obligation and of current pension cost.

The accrued unfunded obligation constitutes the liability that resulted from insufficient revenues allocated to the retirement system in the past. It may also include prior service credits, that is, service prior to the date of establishment of the system, which had not been fully funded.

Current pension cost, however, represents the premium for the pension credits currently earned for services rendered. This cost has also shown an increase during recent years, owing principally to the factors of reduced mortality among pensioners, lower interest rates, and liberalizing changes in the benefit schedule or a broadening of such schedule. However, the rate of increase in current pension cost is considerably less than is the increase in the unfunded obligation. The former reflects current cost changes while the latter is accumulated retroactive amounts covering a period of years.

The rate of increase in current pension cost is considerably less than is the increase in the unfunded pension obligation; the latter represents accumulated retroactive amounts covering a period of years.

ACTUARIAL RESERVE BASIS

An actuarial reserve basis of financing a retirement system is simply a systematic plan of budgeting pension cost. In essence it is a method of providing for the pension obligation as services are rendered by the participants, to the end that full cost requirements can be accumulated during their working lifetime.

The payment of pensions after retirement is financed entirely out of funds already on hand and does not require appropriations by the employer after the employe has retired. It reflects truly the pay-as-you-go principle for meeting costs of government, that is, providing for such cost as it is incurred, and conforms to the budgeting procedures for other operations of government. It gives effect to the established concept that pension cost is a part of compensation for services, payment of which is deferred until the employe has fulfilled the prescribed qualifying conditions.

There is no validity to the argument that the reserve method of financing is expensive and requires increasingly larger appropriations. In fact, through the effect of the interest factor, it results in lower aggregate costs over a period of years than the out-of-pocket or cash disbursement plan. A jointly contributory form of pension plan that represents the general pattern underlying public pension systems constitutes a partnership arrangement between the employes and government. If the employes carry out their part of the bargain by making the specified current contributions, why should not the governmental unit, as the employer, fulfill its obligation on the same basis?

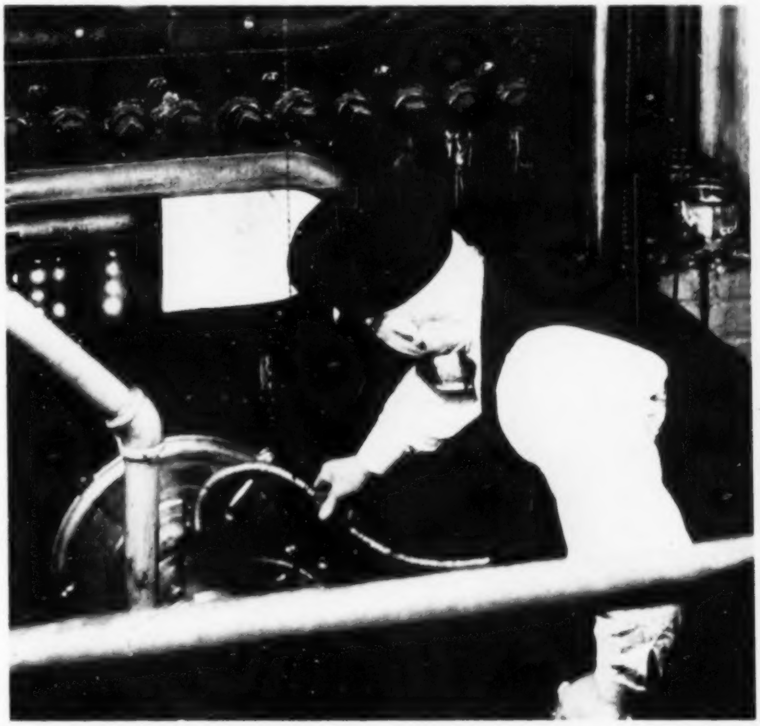
CRITICS OF RESERVE METHODS

The increase of accrued unfunded liabilities in the case of many systems may be directly attributed to the failure of government to meet currently its share of the obligation to the system. The cost obligation to an employer under a jointly contributory plan is not of prohibitive proportions, if the division of cost between the employes and employer is equitable. It can readily be met by the employer provided it is treated in its proper light as a current operating charge. It must be recognized that in many jurisdictions the pension obligation has been considered as an extraneous expenditure to be met when convenient or as an item to be fixed after the revenue requirements of other governmental functions are determined.

Many critics of the reserve method of financing, who point to the large unfunded liabilities, are those who refuse to acknowledge the government's full share of this cost and have consistently opposed the allocation of adequate funds for retirement purposes in accordance with the statutory obligations.

The fact that the types of benefits and qualifying conditions may be somewhat more generous and attractive in some plans than in others is beside the point. Nor is there any justification for opposing adequate governmental appropriations to the systems on the ground that the employe's rate of contribution may be disproportionate to that of the employer's. A retirement plan is generally instituted with the consent and approval of the employer, and he, through the appropriate officials, is presumed to have accepted the provisions in full knowledge of its

Local pension systems are based on all-important personnel objectives, including the recruitment and retention of skilled public servants.



obligations and its current cost implications.

If the size of the government's obligation under a plan is objectionable, this can readily be remedied by a closer scrutiny of legislative proposals for amendatory changes. A more rigid control over these proposals can be established by a requirement of predetermined cost estimates. Upward revisions in rates of contributions by employes can and should be instituted if required to establish a more equitable division of the cost burden.

UNDERLYING PRINCIPLES

There seems to be general agreement on the proposition that government should be financed on the basis of current needs and that each year's requirements should be fully covered by current revenues. It is a general policy to budget currently the expenditures of all agencies and functions of government in accordance with predetermined requirements. This seems to be the accepted rule governing all phases of governmental operations. Then why does any question exist about the application of this principle to pension system financing?

The operations of pension systems are controlled by the same general principles that underlie any other activity of government or any phase of private enterprise. Unfortunately, there seems to have developed some misconceived notions about the complicated and technical character of pension operations. It is true that the subject of pensions has specialized aspects governed by actuarial criteria and insurance principles that are more readily understood by actuaries because of the technical procedures incident to the determination of liabilities and the calculation of contribution rates. But when the extent of the obligation has been determined, the procedure for financing these systems is a relatively simple process. It is no more difficult to understand than the rules governing the preparation of a personnel budget.

Actuarial procedure and actuarial concepts, however, are subject to a relatively simple explanation. One need not approach them with fear, trepidation or frustration. The moment the factor of compound interest is introduced in any financial problem, it becomes actuarial in character. In life insurance, however, this expression takes on a somewhat broader scope because the factor of mortality must be considered.

In pension operations, a further step is taken because of additional factors that are peculiar to a pension fund, such as turnover in employment, rates of salary of the members, their age and sex distribution, their ages at entry into the fund, the number of probable "retirants" and ages at retirement, the mortality among retired pensioners, and the number and rate of disability incidents. The determination of an actuarial reserve is similar to the computation of the present value of a sum of money subject to a given rate of interest, and payable in the future, except that an actuarial reserve involves several factors of discount instead of only one.

An actuarial reserve is the net liability for benefit payments at a given date and represents the present value of all future benefit payments less the present value of all future income. It is the function of the actuary properly to interpret all such factors and others in the determination of actuarial reserve requirements and the rates of contribution that will be necessary to meet these requirements. The confusion that generally arises when the expression "actuarial reserve" is used is due mainly to the lack of understanding of these elementary principles.

TENDENCY TO DEFER COST

The accumulation of comparatively large unfunded accrued liabilities in the case of many pension systems is not due to any inherent weakness in their provisions for benefits and contributions or to the methods of financing but to a tendency to treat pension costs as being different from any other costs of government. We are advised that because of these unfunded liabilities we should forget all about sound financing of the pension obligation and should treat this financial problem in a different manner than the financial requirements of other governmental functions. We are not told, however, that these accruals resulted from the unwarranted withholding of revenue allocations from the retirement systems and the reduction of requested appropriations.

It is not explained that the liabilities for the most part came about as the result of the deferment of cost requirements because of the efforts of public officials and civic agencies to keep the allocations to the retirement systems at reduced levels, below their actual current requirements. Nor are we advised of the attitude of indifference of public officials and civic agencies, which until relatively recent years has characterized their approach to this important governmental function and the expense that it entails.

Liberalizing amendments to existing pension laws have increased the liabilities and account for some portion of the existing accruals. But for the most part the increases in liabilities have arisen through insufficient revenue allocations by government. If a proper and adequate method for financing the pension obligation had been maintained there would have been more control over amendatory changes. Either the creation of the additional obligations would have been curtailed or the full financial needs of the pension system would have been provided.

DANGERS OF IMPROPER FINANCING

Unless pension cost requirements are covered by adequate current revenue, the pension burden to government inevitably will increase progressively and sharply as the number of pensioners rises and attains a level where it may be virtually impossible to meet the pension load out of current appropriations. The result would be the abandonment of these plans and the substitution of federal social security. Such a solution would deal only superficially and ineffectively with the fundamental issues underlying the problem.

Local retirement systems serve an essential need in the development and solution of a difficult personnel problem. The recruitment and retention of skilled public servants to handle with a high degree of efficiency the responsibilities inherent in public service are a momentous task. The expenditure of huge sums of monies in the exercise of public functions requires experience, skill, integrity and devotion to the public trust.

A government that fails to attract employes with these qualifications will render an uneconomic, wasteful and inefficient service to the people. In the recruitment of the desired personnel and in its retention, a pension system plays an important and decisive rôle. It is the principal justification for its operation and maintenance.

A plan of social security cannot promote this impelling objective for local governments. Its purpose is solely one of humanitarian motivation, to provide reasonable subsistence needs

for persons who have reached an unemployable status, and for their dependents and survivors. It has little or no concern with the all-important personnel objective upon which local systems are predicated. It is precisely what its title denotes—a system of social security—and nothing more.

The differences in the objectives of social security and local pension systems are crucial to the problem. The perspective of the governmental employers who are impressed with the economic advantages of social security in lieu of local plans is too limited. The broader perspective must comprehend the advantages and limitations of both plans and must endeavor to promote and preserve the essential objectives of each.

BUDGETING OF PENSION COST

Financing pensions according to the reserve system is budgeting pension cost currently. From the standpoint of sound financial procedure, pension cost should be provided for as a part of personal services. Each year's service, in fact each month's service, creates a proportionate amount of the pension obligation. Pensions, therefore, are essentially deferred salary.

To give full effect to this concept, each department or division of government should include in its budget for personal service the required amount to cover currently accruing pension cost. The total personal service requirements would consist of the salary expense plus pension cost. Thus, effect would be given in each pay-roll budget to current pension expense in accordance with the true nature of the obligation.

The additional expense for this purpose would consist of a predetermined rate, computed by the actuary, which would be level and uniform throughout an employe's service and would be changed only if liberalizing amendments are made, if interest rates or mortality tables are revised, or when the results of an actuarial investigation of the retirement system disclose that such a change is necessary. Such rate would be a composite one and include both current cost and a provision for carrying or amortizing the unfunded accrued liability requirements.

The advantages of this method of financing are numerous. It would give effect to the pay-as-you-go policy of financing the government's obligation. The cost burden in the current salary budget would be placed where it properly belongs and not charged to the budget for future years after the present employes have retired and are drawing their pensions.

This method conforms to the principle that pension cost is a part of compensation for service. Each division or department would budget its own pension cost. The pension system requirements would fluctuate with changes in salary expense, either upward or downward, inasmuch as it would be expressed as a fixed percentage thereof.

IN FORMULATING PAY SCHEDULES

It would make it necessary to take pension cost into account in the formulation of pay schedules or in the employment of new personnel. It would result in establishing a rigid control over pension obligations by requiring that the element of cost be considered in any changes in the benefit schedule or in qualifying conditions.

A plan of currently budgeting pension cost would also have a salutary effect on new and liberalizing pension proposals since their cost implications would have to be made known in advance because of their effect on the established contribution rate. Pension cost would be brought out into the open and public officials would be made aware of the character and extent of the pension obligation.

It would also result in maintaining proper and adequate revenues for the retirement system at all times and under any conditions and would avoid deferment of obligations. It would be of value in stabilizing revenues for the pension systems, thus assuring their stability and security. Above all, it would bring about, over a period of time, a reduction in over-all governmental expenditures, because the inclusion of pension cost in the current budget will have a sobering effect on any plans for the employment of new personnel, for increases in salaries, or for other expenditures by a department.

The total pension cost would be fully expressed as a direct operating charge and as an integral part of a budget directly related to current salaries rather than as an indirect expenditure or as a line item, which is now the case in most jurisdictions. There should develop, therefore, a tendency on the part of the several departments or divisions of government to limit expenditures for other purposes. This tendency should result in definite economies in the operation of government.

CONCLUSION

The old concept that contributions by a governmental employer toward a retirement system retain their form as public funds is rapidly being replaced by the rule that such contributions are properly earned employe credits and a part of the trust fund maintained for meeting the obligations of the retirement system. This approach is given greater emphasis by the underlying trend toward legal vesting of pension rights.

Over a period of years the reserve basis of financing is still the least expensive method of meeting pension cost. It is the only orderly arrangement for financing. Deviations from this method have only served to intensify the financial problems for the local retirement systems and for the governmental employers.

The shortsightedness of such a policy and its fundamental deficiencies are now disclosed. Any modification of this method only results in concealing the true pension obligation and ultimately increases rather than decreases the cost of government.

The actuarial reserve method is the only proper means of measuring the pension obligation. Pension cost must be considered in terms of the present value of all future payments to be made, rather than upon the basis of each year's cash disbursements, referred to as the out-of-pocket method. It is only in this way that costs can be kept within proper limitations.

Pension proposals must be evaluated on this basis to determine their full effect and their true cost implications. There is no other way of measuring this obligation properly. A modified form of financing, which does not fully give effect to the current obligations of pensions, creates a tendency to overlook this important principle and results in greater future costs, increased unfunded liabilities, and improvidence in government.

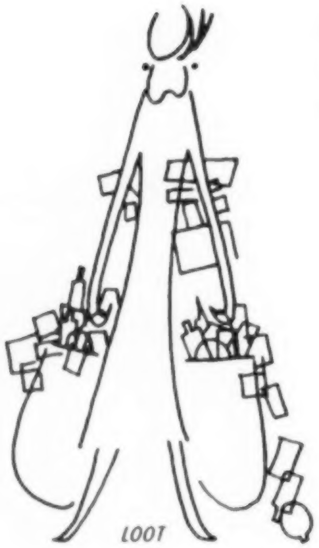
There is no substitute for proper financing of pensions in accordance with fundamental principles. There is no magic formula for meeting this cost. When these facts are clearly recognized and understood, the financial problems of government concerning the retirement systems will be solved, and the financial condition of such systems will become stabilized.

CONVENTION CHARACTERS

"OH WHAT A BEAUTIFUL MORNING!"

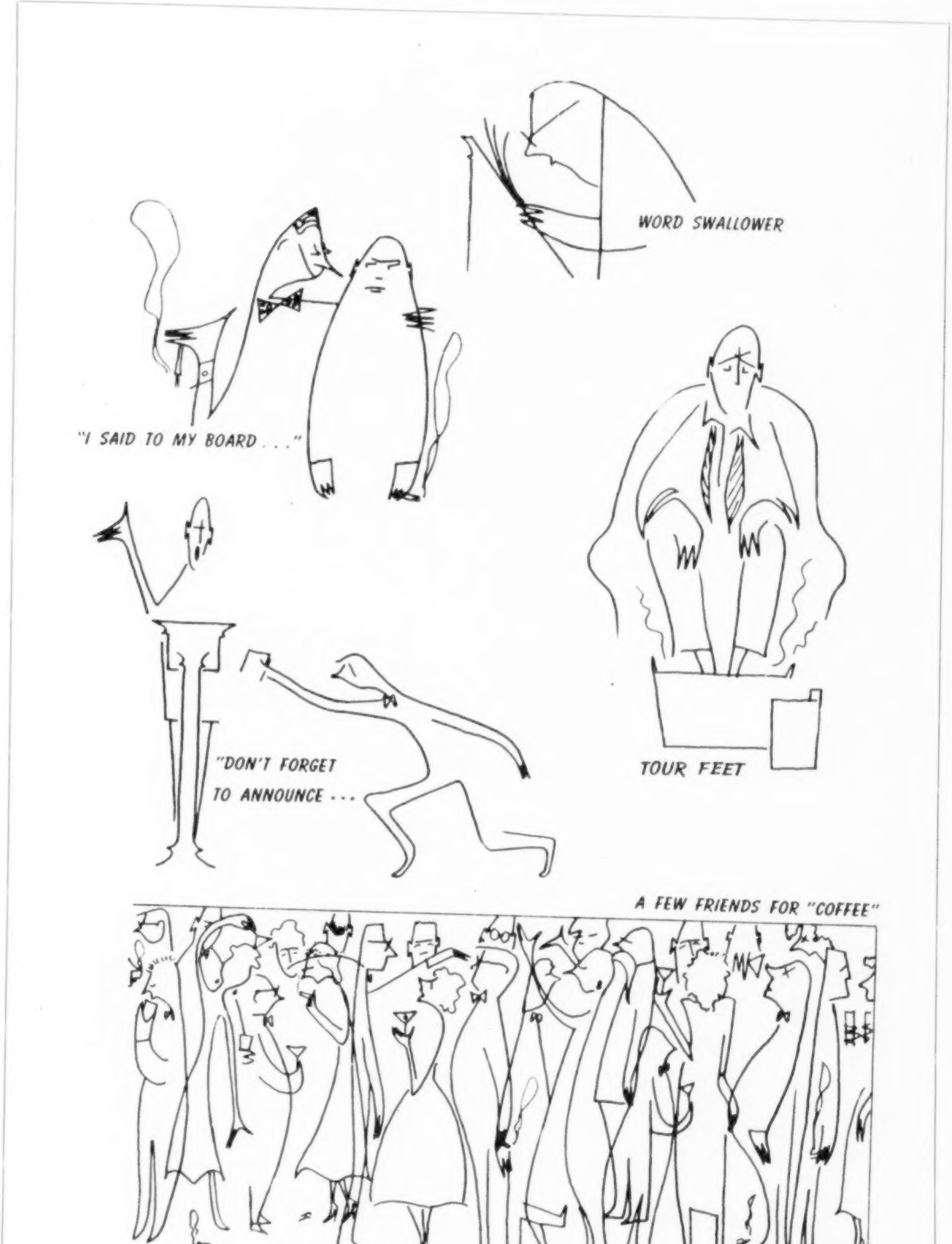
"DON'T LET IT GO ANY FURTHER . . ."

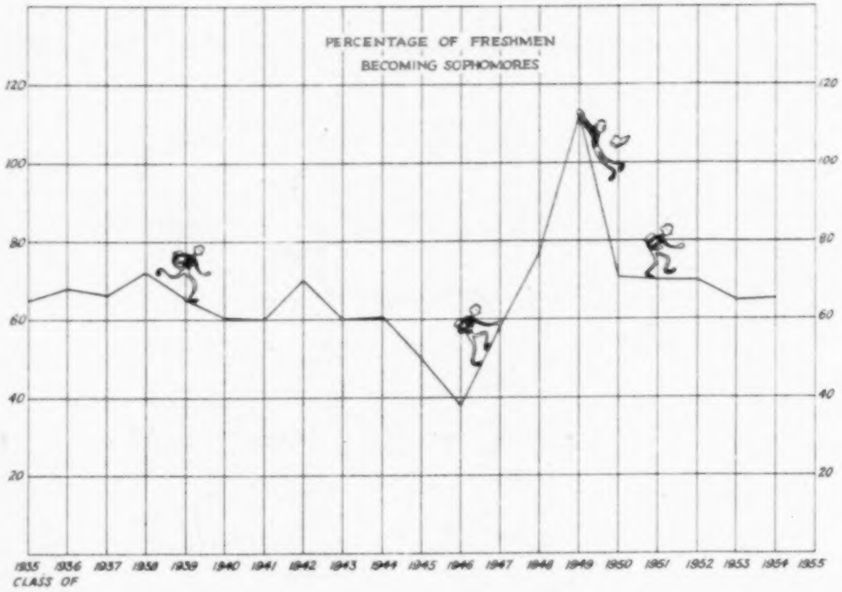
"DOWN WITH MC CARTHYISM"

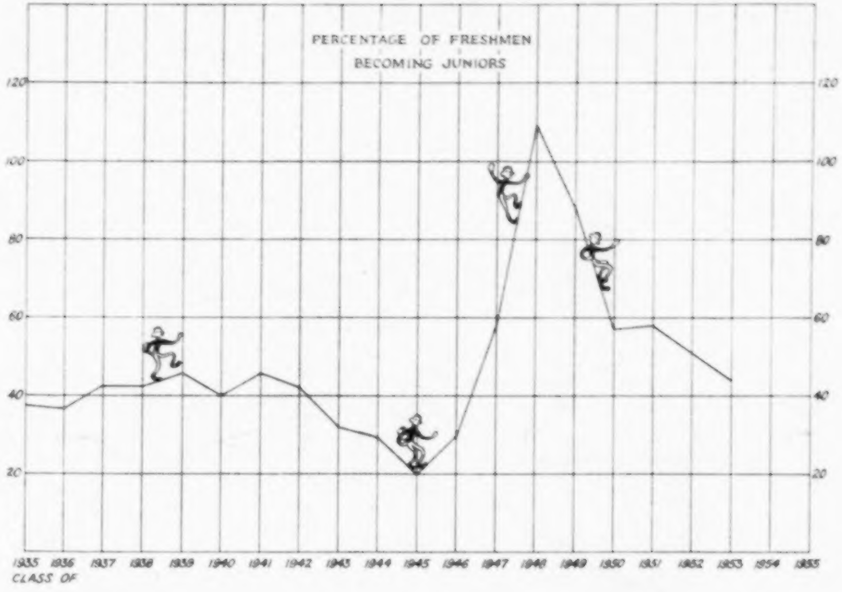


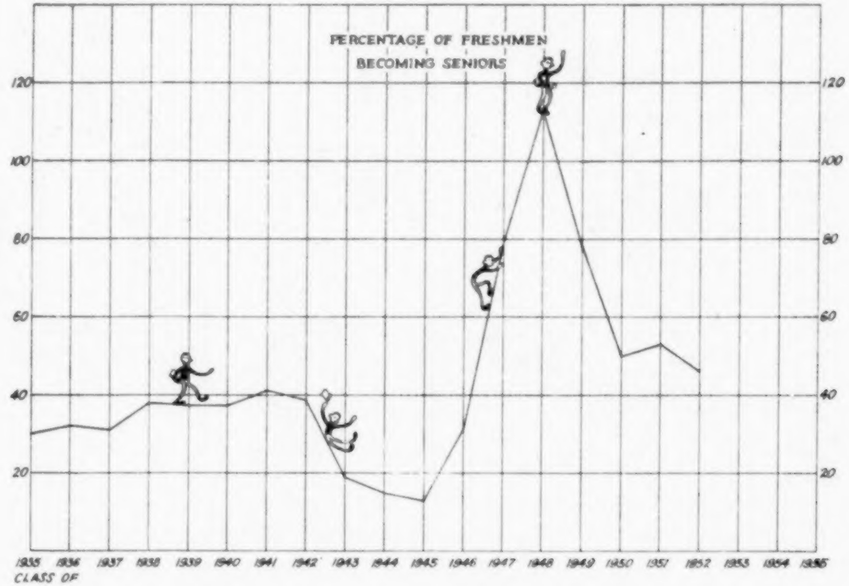
LOOT

VESPERS


WORD SWALLOWER
"I SAID TO MY BOARD . . ."
"DON'T FORGET
TO ANNOUNCE . . .
TOUR FEET
A FEW FRIENDS FOR "COFFEE"







THREE CHARTS USED BY COLLEGE OF PUGET SOUND IN ESTIMATING PROBABLE NUMBER OF UPPERCLASSMEN WHO WOULD BE REGISTERED THE FOLLOWING YEAR

How we make use of

ENROLLMENT DATA FOR BUDGET PURPOSES

GERARD BANKS
Business Officer
College of Puget Sound
Tacoma, Wash.

AT MOST COLLEGES THAT HAVE experienced severe decreases percentagewise in total enrollment since the peak of the late Forties, the business officer finds himself under the necessity of assuming the rôle of crystal-gazer in estimating the enrollment for the next year for the purpose of being able to make a workable budget that will not prove embarrassing in its operation either to him or to the president.

When this problem presented itself to me, I found I did not own a crystal ball, nor did I possess occult powers. I was forced to find some substitute, and I found it in a critical appraisal and analysis of enrollment trends at my own institution from data supplied me by the registrar's office. This institution is a four-year liberal arts college located in a metropolitan center.

SERVE AS ACCURATE CRITERIA

In such a study, I searched for a few critical figures that would serve as accurate criteria. The first of these figures turned out to be the average long session full-time enrollment or its equivalent. Several years ago I noticed that the total academic receipts at my institution, from full-time and part-time students, when divided by the enrollment of full-time students or their equivalent in the long session gave a quotient equal to the official tuition rate, or a little better. Since that time, after determination of the most probable long session enrollment, simple multiplication by the tuition rate has given the figure of anticipated academic income with a high degree of accuracy. This has obviated the necessity of making allowance for part-time and evening school students.

The problem of estimating the total enrollment was broken down into four smaller problems, namely, that of determining the probable number of freshmen, sophomores, juniors and seniors, who would be in attendance the following year. Each of these four problems was approached in two different ways.

Utilizing data compiled since 1944, I made studies of the percentages of freshmen who became sophomores, of sophomores who became juniors, and of juniors who became seniors. These percentages, when plotted, determined in each case a definite trend and it was easy to determine by extrapolation the per cent most likely for the ensuing year. In this manner the number of upper classmen could be predicted. A chart of the number in the incoming freshmen class over the last 15 years enabled us to make a conservative estimate of the freshmen class for the following year. The sum of these figures gave us a predicted enrollment.

The second approach was made by working only with the number in the freshmen class, obtaining the percentages of each class that arrived at the sophomore, junior and senior levels. This study was projected back to 1935 and a chart was made of the various percentages. From these three charts it was not difficult to estimate the most probable percentages to be used in the calculation of the numbers in the various upper classes for the following year. The probable number in the freshmen class was obtained as indicated.

Any first-rate student in mathematics will quickly point out that the percentages obtained in the second approach could have been obtained theoretically from the percentages derived in the first study, and vice versa. As a long-time teacher of mathematics, I readily agree. But I am simply relating how the data were utilized from two different standpoints, and one set of results corroborated the second set. I would point out that every enrollment figure used represented an average for the entire academic session of nine months, rather than for one term or semester. Additional studies would be needed, for example, if one endeavored to predict the fall semester enrollment from that of the preceding spring, or even from the fall enrollment of the preceding year.

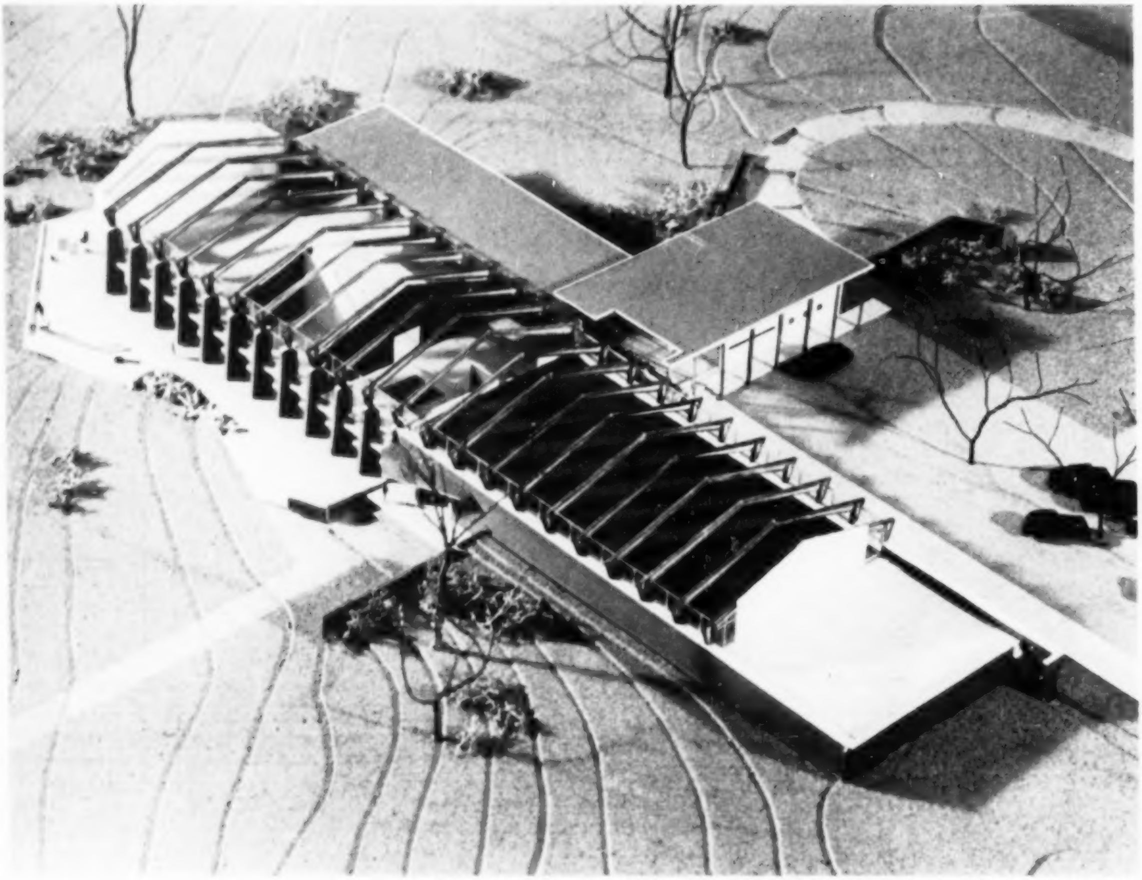
I have used the foregoing analysis for the last four years in making estimates of our probable enrollment. The final estimate is made in March for the following academic year. For the session of 1949-50 my estimate was 1864; the actual enrollment was 1885. For 1950-51 my estimate was 1600; the actual enrollment was 1516. The discrepancy between the predicted and actual enrollment in this year was sufficient to compel us to make reductions in our planned budget, which, at best, is a difficult and sometimes heartbreaking procedure. For 1951-52 our estimate was 1000 students; the actual enrollment was 1109.

TOO CONSERVATIVE

There are those who would point out to me that, had I used the data correctly, my approximation would more nearly have equaled the actual attendance in 1951-52. However, having just experienced a year of mandatory reductions in the budget as originally planned, I think I can be pardoned for having erred on the side of conservatism.

Continuing to use these methods in making enrollment estimates, I gave my estimate for 1952-53 to the president and trustees in March of 1952 and the budget based on such an estimate was approved and adopted.

Our enrollment figure for the fall semester of 1952-53 was such that nothing short of a catastrophe could have prevented my yearly estimate from being below the actual attendance by a comfortable margin. After all, a college business officer makes this sort of study in order to keep his institution solvent—not to gain a reputation as a soothsayer.



VALPARAISO UNION

A STUDY OF COSTS AND ARCHITECTURAL FORM

MICHAEL M. HARE
Hare and Hatch, Architects
New York

THIS DISCUSSION IS INTENDED TO supplement an article published in COLLEGE AND UNIVERSITY BUSINESS in 1951.* That article pointed up the problems posed for institutions by the steadily increasing cost of construction. Despite a probable lull in 1953 and 1954, there is no reason to believe that this over-all trend will be any different in the future.

The increasing difficulty in holding the cost of physical plant in reasonable proportion to other services clearly indicates the necessity for colleges to accept building plans based on standardized products designed on a module. The earlier article discussed some of the implications of modular design and stated that "today it appears that economic factors force us to adopt an esthetic where a determination of form rests . . . on the appearance of prefabricated units designed in the factory."

The problems that confront the architect using modular design for college work are several and not easy of solution. The accompanying illustrations of the projected college union for Valparaiso University illustrate one solution and the method used to reach it. Were we dealing with commercial structures, these difficulties would largely disappear because many commercial structures have a life expectancy of only 25 years and a repetition of room sizes and functions permits the use of many more standardized materials of relatively short life. Furthermore, a commercial building is rarely tied to a complex of buildings previously built in a traditional style or styles.

Although the site of the union at Valparaiso is on a new campus, two

*Hare, Michael M.: What Can We Afford in the Way of Campus Architecture, College and University Business. **10:**33 (June) 1951.

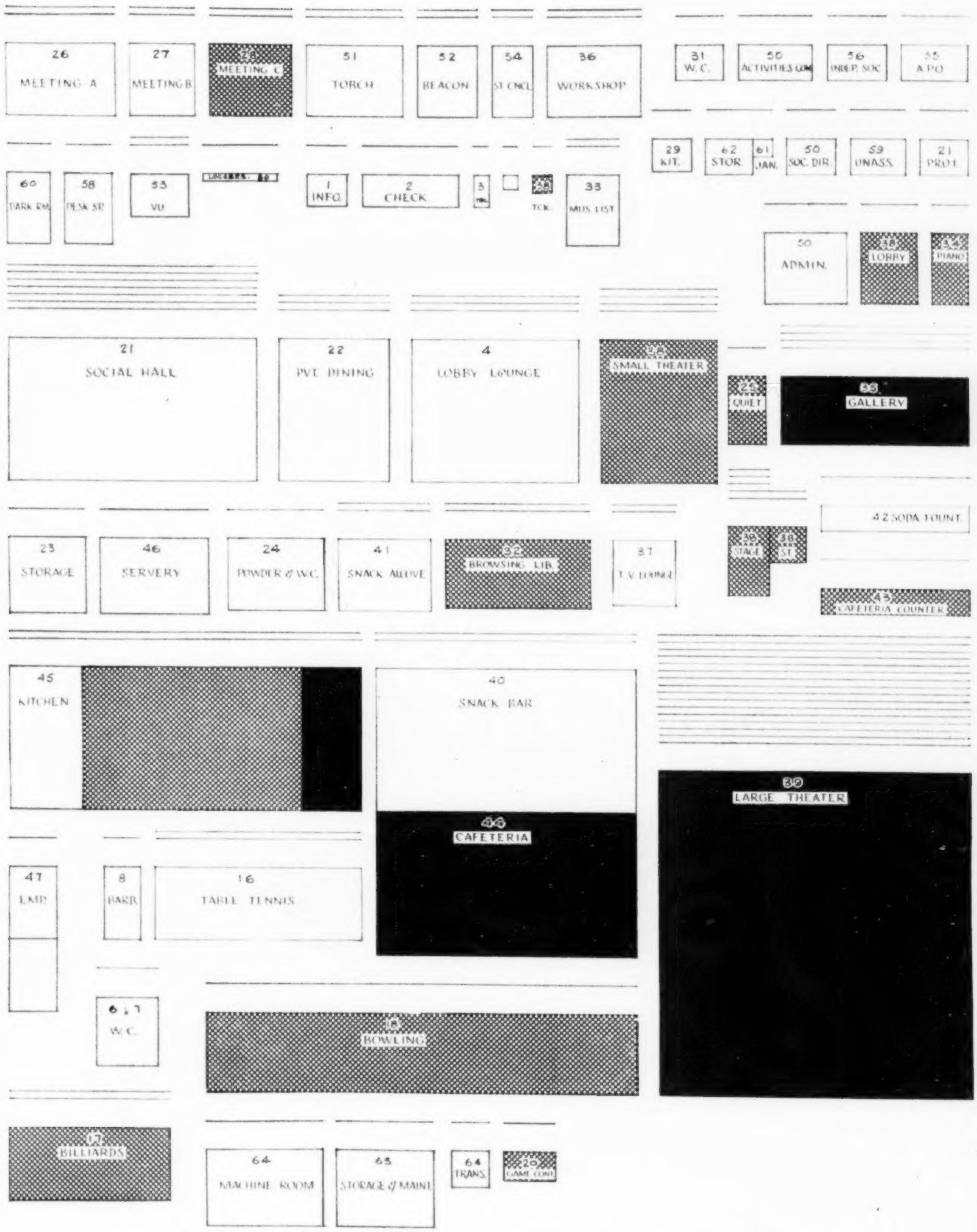
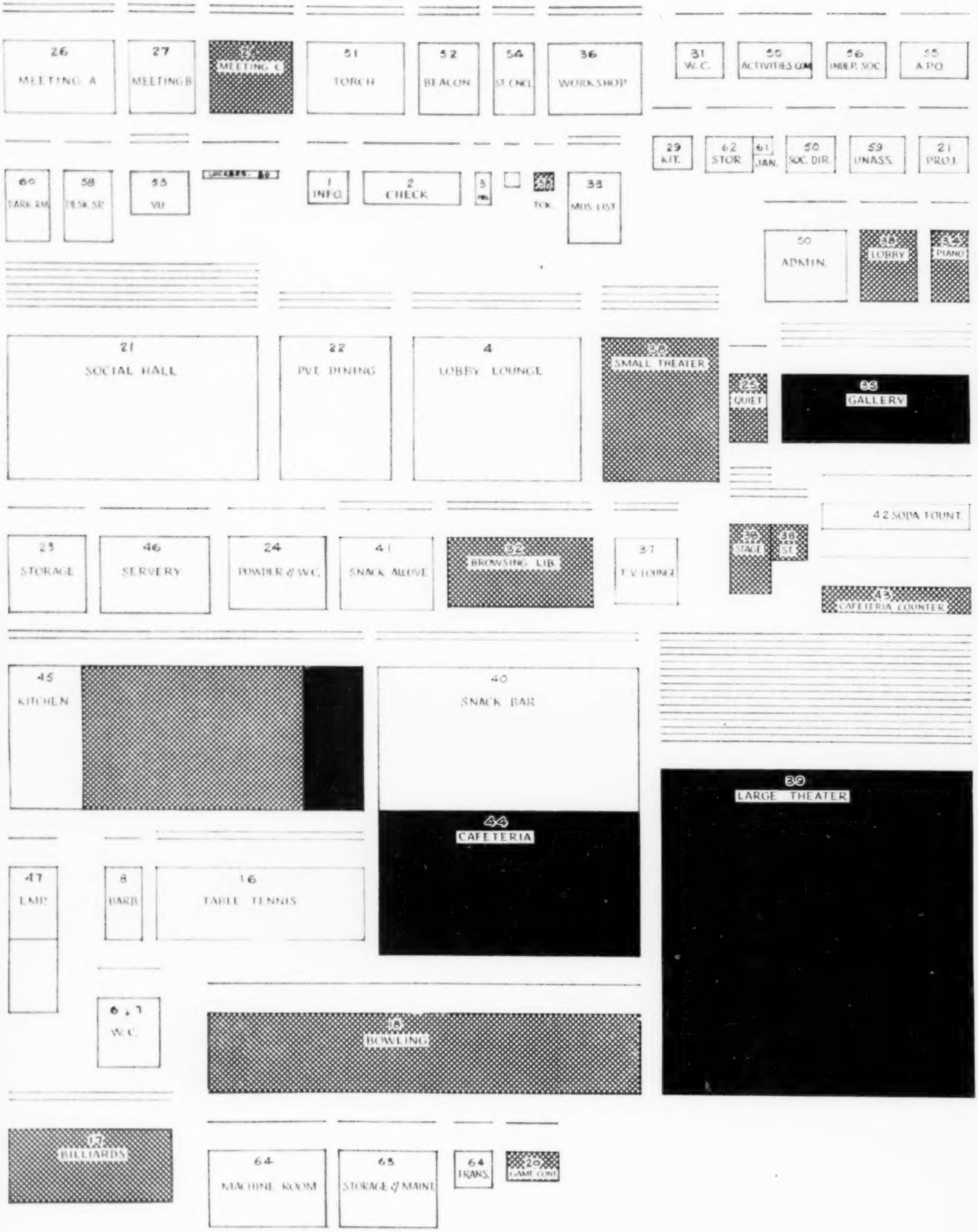


Fig. 1—Two-dimensional representation of needed rooms without any organization into a plan.

Tudor Gothic dormitories in brick and limestone have already been constructed near by. Therefore, our first step in considering the solution was to determine the probable cost of duplicating that construction. We had figures available for somewhat similar construction completed in 1952 in the

(*Continued on Page 36*)



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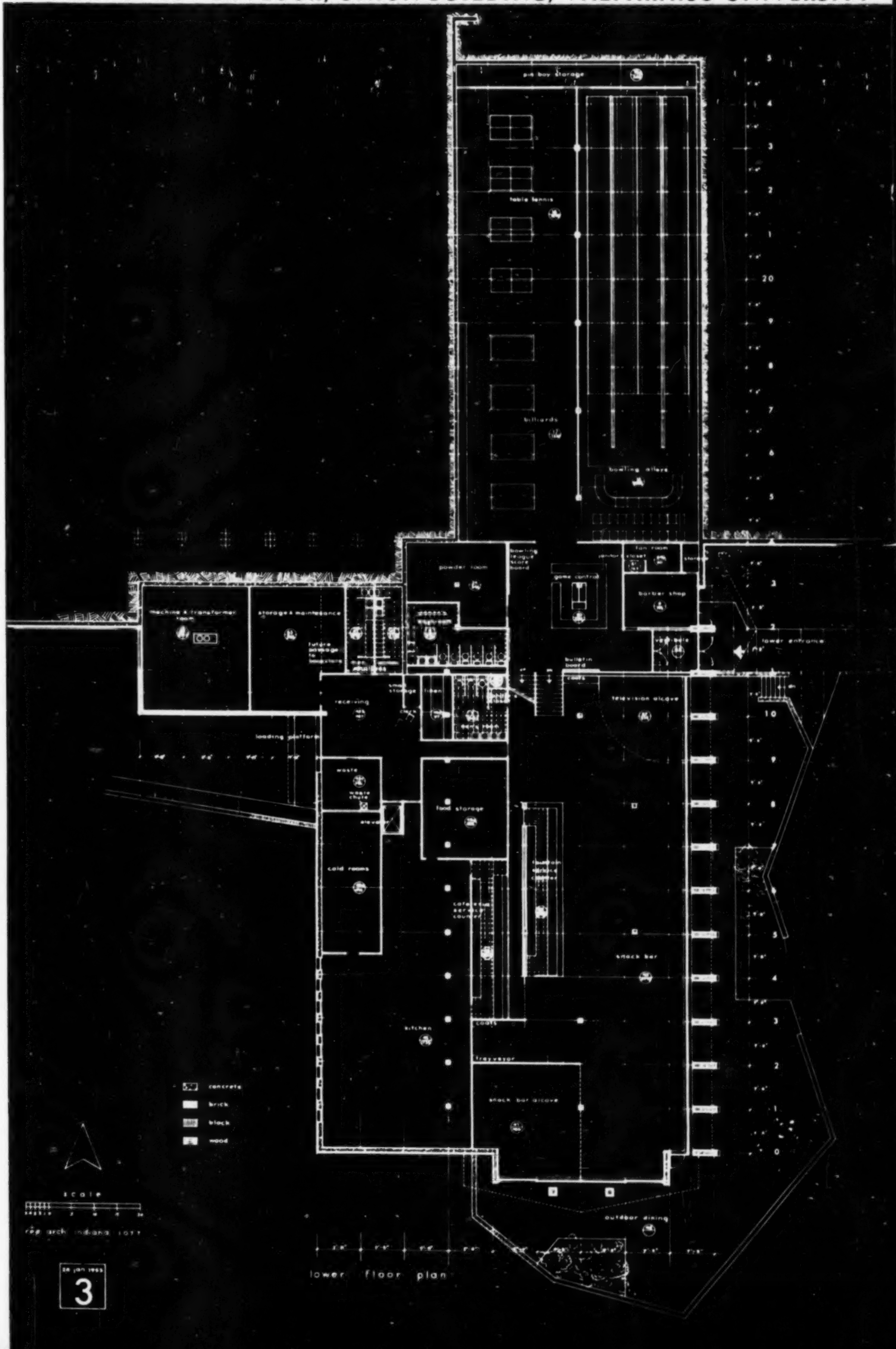
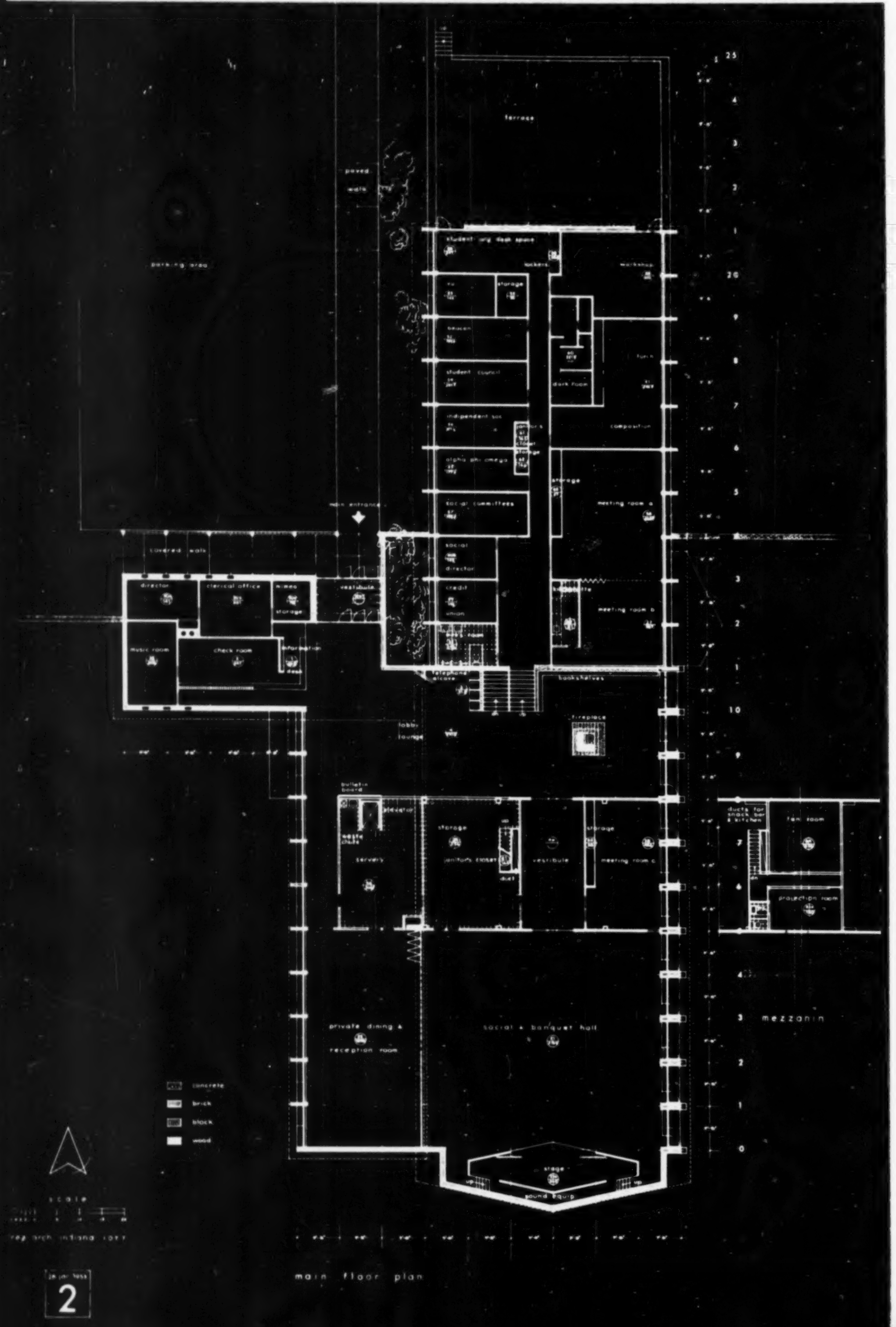
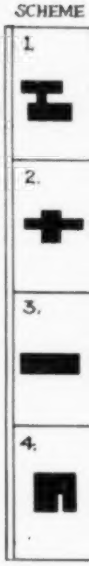
(*Continued on Page 36*)

PLAN OF LOWER FLOOR, UNION BUILDING, VALPARAISO UNIVERSITY




terrace
paved walk
parking area
main entrance
covered walk
director
clerical office
mimeo
storage
vestibule
music room
check room
information desk
student org desk space
lockers
workshop
storage
beacon
student council
dark room
independent soc
composition
alpha phi omega
social committees
meeting room a
social director
credit union
meeting room b
telephone alcove
bookshelves
lobby lounge
fireplace
bulletin board
waste chute
servery
storage
janitor's closet
vestibule
storage
meeting room c
ducts for snack bar & kitchen
fan room
projection room
mezzanin
private dining & reception room
social & banquet hall
stage
sound equip
concrete
brick
block
wood
scale
main floor plan
2


SCHEME
1.
2.
3.
4.

SCHEME ANALYSIS FOR VALPARAISO COLLEGE UNION

	RELATIVE USEFULNESS		RELATIVE COST						
	40% EXPANSION		50 % - COST					10% SUITABILITY	
	30%	10%	11%	8%	14%	5%	12%		
SCHEME	PRESENT PLAN	EXPANDED PLAN	GROSS SQ. FT. VS. NET SQ. FT.	EXTERIOR WALL AND ROOF SQ. FT.	CUBAGE	STRUCTURAL	MECHANICAL	ADAPTABILITY TO SITE	SCORE (TOTAL % / COST %)
1.	20	6	10.4	6.1	11.3	4.5	10	9	77.3 / 84.6
2.	21	10	10.7	6.8	11.64	5	12	9	86.14 / 92.28
3.	26	10	10.7	8.0	12.9	5	11	7	90.6 / 95.2
4.	18	4	11	6.56	11.6	4	10	5	70.16 / 86.32

Fig. 2—Analysis of four most promising schemes, based on relative usefulness, relative cost, and suitability.

Chicago area near by and these indicated a cost of approximately $22 per gross square foot.

It should be noted that properly planned college unions are in some cases half again as expensive as the simpler college buildings because of the great variety of space requirements, dual purpose rooms, and general club-like character. By no stretch of the imagination could the university afford any such costs for this building, particularly in view of the fact that the money for the building would come out of the students' pockets in the form of a fee for which they had overwhelmingly voted. Any unnecessary increase in cost would mean a breach of faith with the students who had voluntarily deprived themselves, even knowing that they would not be at the university by the time the building was in use.

Therefore, it was necessary to make a transition to a design more economical than could possibly be achieved through duplication of the Tudor. Our conclusion was that this transition and blending could be achieved by using brick and limestone similar to the existing buildings, although not in the same proportions. We adopted these materials because they were suitable to the campus and would assure long life. Any economies had to be achieved without lowered quality. Brick itself represents the beginnings of modular design in the sense that the single brick is a constant unit.

FINDING THE L.C.D.

The continuing effort in modular design must be to digest the program of required facilities and arrive at what might be called the lowest common denominator. The program and facility list for the building was prepared by our consultant, Porter Butts of the Wisconsin Union, with our assistance. The facilities required by the program are illustrated in Figure 1 (*p. 33*), which is a two dimensional representation of the needed rooms but without any organization into a plan. (In the original diagram, color indicated present and future construction.)

The purpose in determining a lowest common denominator of space is to permit the determination, in turn, of a module and structural bay which must prevail as far as possible throughout the building to permit the use of prefabricated units and cut down the labor cost in erection.

The freezing of the bay sizes did not take place until after weeks of study on a variety of functional schemes. Bays of various sizes were considered but in all schemes standardization of the bay and module was implicit. The bay, of course, is a multiple of the module. In this country, the module is usually assumed to be 4 inches as recommended by the American Standards Association.

Economy did not depend on module standardization alone because a variety of schemes was possible with this system. Therefore, our next step was to pick the four most promising and widely differing schemes and to make an analysis of the merits of these, illustrated in Figure 2. It will be seen by reference to the illustration that on a score of 100 per cent, or perfect, we assigned 40 per cent to usefulness, 50 per cent to cost, and 10 per cent to suitability to the campus. The assumption of 10 per cent for suitability assumed that we could achieve a certain suitability in all designs but permitted us to penalize the least suitable.

A plan that promised to achieve perfection in all its room arrangements and in its possibilities for expansion would get 40 percentage points, per-

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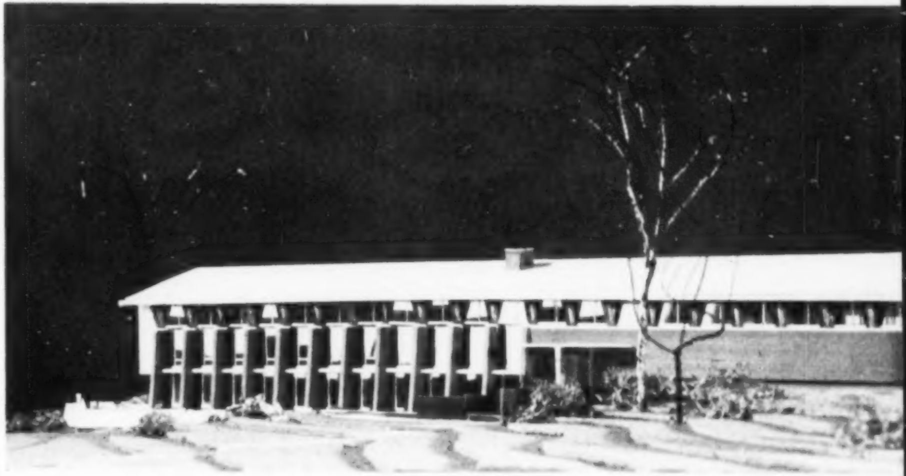
A plan that promised to achieve perfection in all its room arrangements and in its possibilities for expansion would get 40 percentage points, per-

fection in economy of construction an additional 50 points and the perfectly suitable building another 10 points. The decision to give 50 points for economy was arbitrary and based on the simple fact that unless the building could be built inexpensively no building would be built. The breakdown of percentage points as indicated between relative square footage, exterior wall and roof areas, cubage, mechanical trades, and structural frame was determined at a staff conference with our engineers, cubage representing the remaining cost of items not otherwise broken down. The immediate result of the analysis was to eliminate Schemes 1 and 4 on the ground of high cost.

Scheme 4 we abandoned without a qualm because the only advantage that it ever had was the possibility of lower cost, which the analysis proved ephemeral. Scheme 1 was abandoned with some reluctance because, despite certain disadvantages in plan arrangement, it had other possibilities for a free arrangement of the facilities unhampered by a rigid envelope and because its rather rambling conformation made it appear suitable to the campus. The differences in point score between Schemes 2 and 3 were not very substantial. Scheme 3, which was adopted initially as a result of the analysis, gradually developed in such a way that it had certain characteristics of Scheme 2. The silhouettes of the buildings as delineated in Figure 2 are simply symbols representing basic solutions which we had studied at larger scale.



The most satisfactory solution to the problem of main floor framing proved to be the wood arch and buttress, closely related to the Gothic.

RESTUDYING THE MODULE

Once Scheme 3 was adopted, the road to a successful building was to stay within the simple rectangular envelope as far as possible without plan requirements being violated. Yet, that could not be done entirely as will be seen from the plans. Our effort was bent toward achieving a completely integrated building in the sense that we studied and restudied the module, the structural bay, and the over-all dimensions and shape so that in the end we would have a design such that all pieces of the puzzle shown in Figure 1 dropped into their proper "niches" governed by the module and bay. It is of interest to note that a wood arch and brick buttress, as illustrated in the photograph, were finally chosen as the most satisfactory solution to the main floor framing. In structural theory, this is related to the Gothic.

The many changes the plans then underwent express the essential conflict present in all architectural design. By this we mean that it is possible to approach architecture from two widely differing points of view. At one extreme, the belief would be that form should perfectly express the simplest construction resulting in the lowest possible cost without regard to the consequent mix-up of facilities. At the other extreme is the idea that its form should perfectly express human needs whether they be prosaic room areas or the psychological requirements of an elaborate social pattern. In such a case, construction is only a means to an end.

The first extreme leads to a primitive form exemplified by the Romanesque and early Gothic, producing a form principally expressive of an engineering solution even though at a later date such a style may flower in a more humanistic form. The second approach has led traditionally to an art form, carrying within it the seeds of decadence as in the late Italian Renaissance. The perfect blending or reconciliation of these two approaches could well be used as one definition of the art of building.

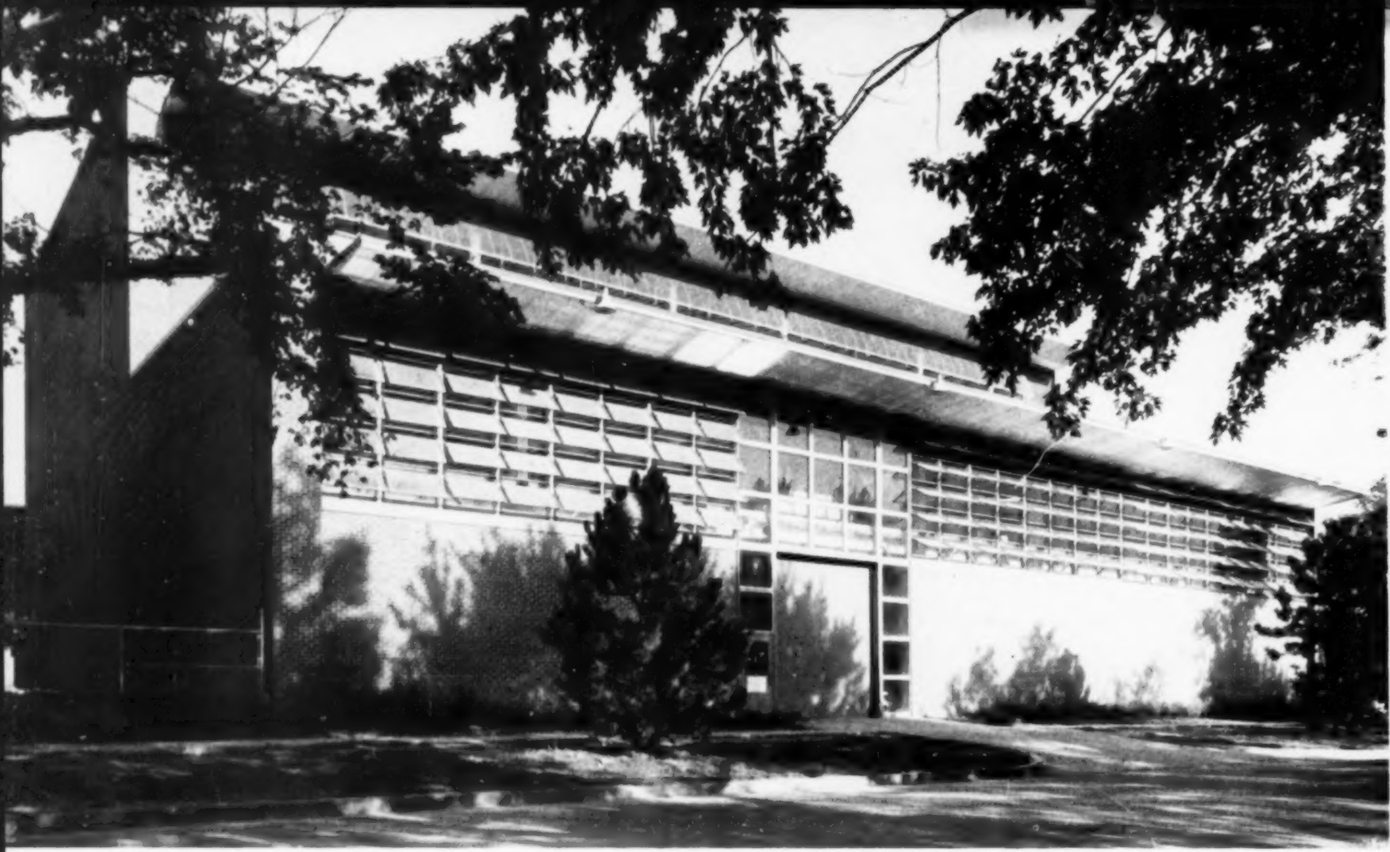
Our own search for a solution to this conflict of extremes meant the study of innumerable varieties of Scheme 3, each with its signal advantage and many disadvantages. The results are as shown by the drawings and photographs. The builder's estimate based on our drawings shows the square foot cost to be $16.52, which we feel illustrates the validity of this type of approach.

To assess the actual appeal of this design to the heart rather than to the mind is beyond the scope of this article, but some discussion of the potential of such architecture in this regard is pertinent to the problem. The emotional appeal of Gothic rests, if only subconsciously, on the knowledge that it represented a faith and a way of life that has been lost. In the Gothic period, the spiritual aspirations of man were expressed in architecture through the hands of thousands of artisans who shared a common faith and expressed it in their craft.

SPIRITUAL VALUES REFLECTED

Honest architecture in any period will always reflect indirectly the religions, faith and ideals of a civilization. Today, with modular architecture and the factory designed product, the religious faith expressed is not only the faith of the architect or the owner but equally the faith (or lack of it) of the technician and the laborer in the factory. It represents the faith of society as a whole and faith cannot be imitated. The spiritual values respected by a civilization are reflected in its architecture.

As in the past, so today the honest architect can synthesize these values and he can contribute his humble effort to adjust them, but in the last analysis history will judge architecture by the same moral standards used to judge a civilization and no imitation of a past faith will pass muster. Whatever our limitations, we must rely on an expression of the faith and technics of our own times.



POWER PLANT building at Oklahoma

is a handsome skin to house newly purchased equipment

TRUETT H. COSTON
Coston and Frankfurt
Architects and Engineers
Oklahoma City, Okla.

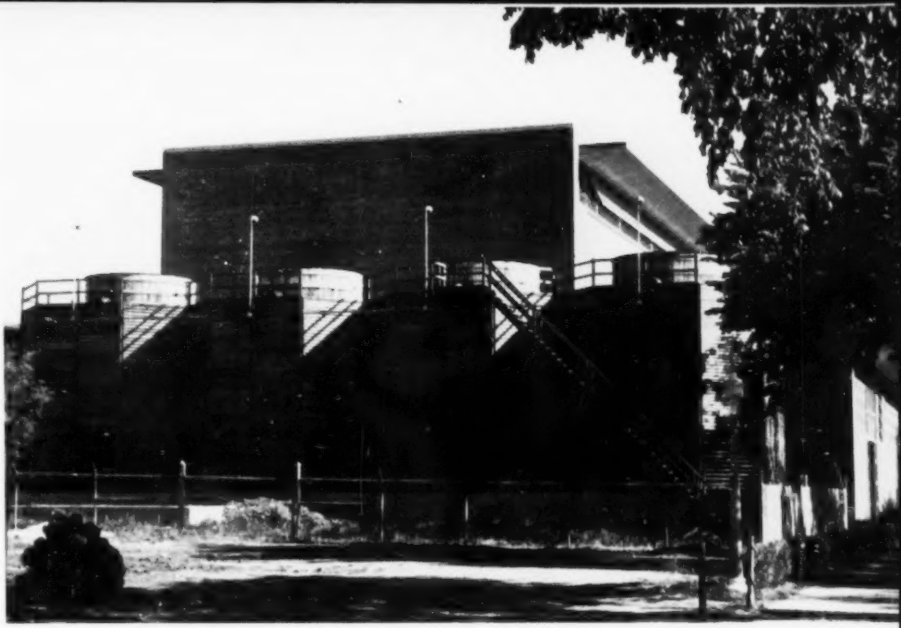
THE UNIVERSITY OF OKLAHOMA recently put into operation a new power plant on its campus at Norman. This plant will provide electrical energy and process and heating steam for all the buildings on the campus.

During preliminary design of this plant, extensive studies were made of the past and present requirements for electrical energy, process and heating steam required by all the buildings on the campus. From these studies, combined with the university's near-future building program, the installed capacity of the plant was established. Projecting these studies into the future, the architects and engineers provided ample space within the building for future equipment to satisfy the contemplated ultimate growth of the university.

With the required capacities established, preliminary layouts were made, specifications were written, and contracts were awarded on the major items of power plant equipment. This equipment was first purchased and then the building designed to fit the equipment of the successful bidders. The building was designed as a "skin" to house the purchased equipment, with generous space on the operating floor. Generous catwalks were included to permit engineering students of the university to use this facilitiy for laboratory classes and field trips.

The foundations are of bored-bell reinforced concrete; basement walls are reinforced concrete, and floor framing and turbine and boiler foundations are reinforced concrete. Concrete was used to minimize vibration. Above the first floor, the north and south end walls are 3 foot cavity type brick, carrying a portion of the roof loads. Architecturally, mass was desirable. The remainder of the system was structural steel for carrying roof, boilers, catwalks and other equipment loads.

Only the steam generating units, boiler feed pumps, turbine-generator units, and switch-gear are installed on the main operating floor. The steam condensers from the turbine-generator units, the circulating water pumps, the stand-by fuel oil heater and pumps, the blow-down tanks, and the other auxiliaries are located in a basement below the operating room floor. Similarly, the piping with the exception of the vertical risers at the rear of the steam generators is installed at the basement ceiling.



The power house building was completed; the university then decided to install a central air-conditioning system. This necessitated another building adjacent to the power plant. Here are sections of the counter-flow induced draft cooling tower.

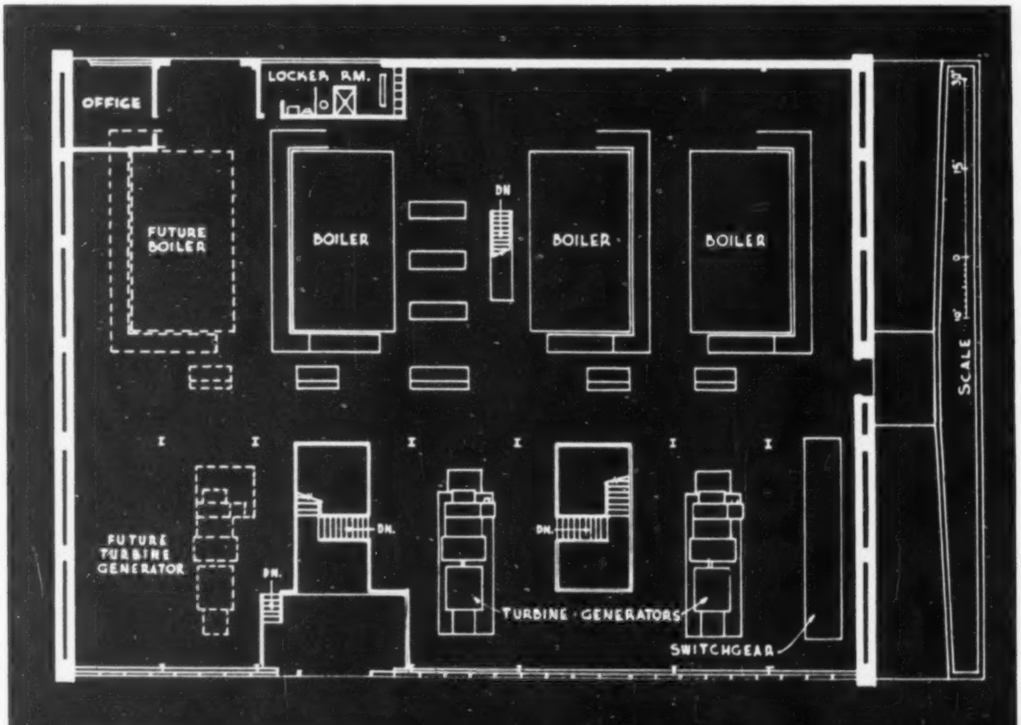
The abundance of natural light from the motor operated continuous windows near the roof lines of both the boiler and generator sections, as well as other well placed windows, and the absence of piping on the operating floor give an appearance of spaciousness even with the equipment installed. The layout is also such that an operator can view most of the controls for the complete operation of the plant from a central point in front of the master boiler panel.

Normal fuel for the boilers is natural gas; however, a fuel oil system, including heater, pumps and combination burners, provides for continuous firing in event of gas failure.

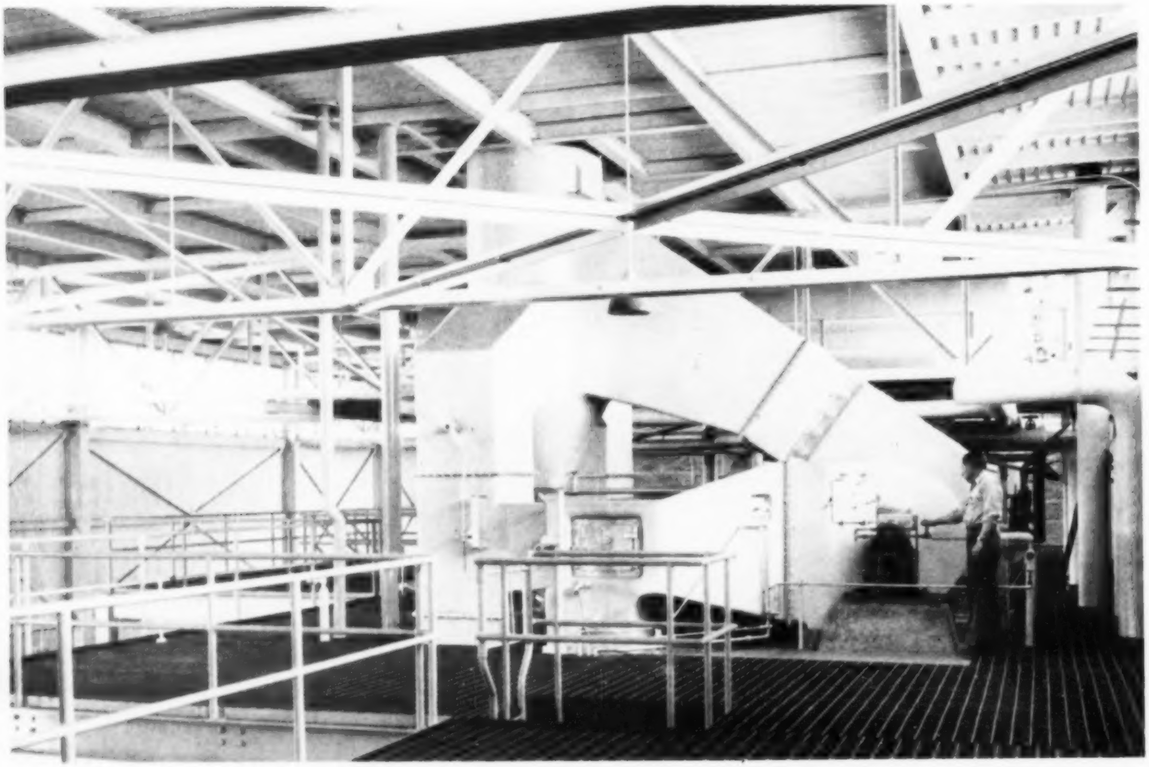
The main room has floors of integrally colored concrete, and the cavity walls of brick are surfaced inside with a 10 foot high wainscot of glazed tile. Steel roof trusses and deck are left exposed. Piping is painted in a color code, for ready identification of high-pressure steam, condensate, cold and hot water, and so forth.

About the time the building was completed, the university decided to install a central air-conditioning system for the campus. It was necessary to build another building adjacent to the power plant to house a 1000 ton compressor (with the building designed to permit the addition of additional compressors of this size, as required). A nicer job would have resulted if this equipment had been housed in the original power plant building.

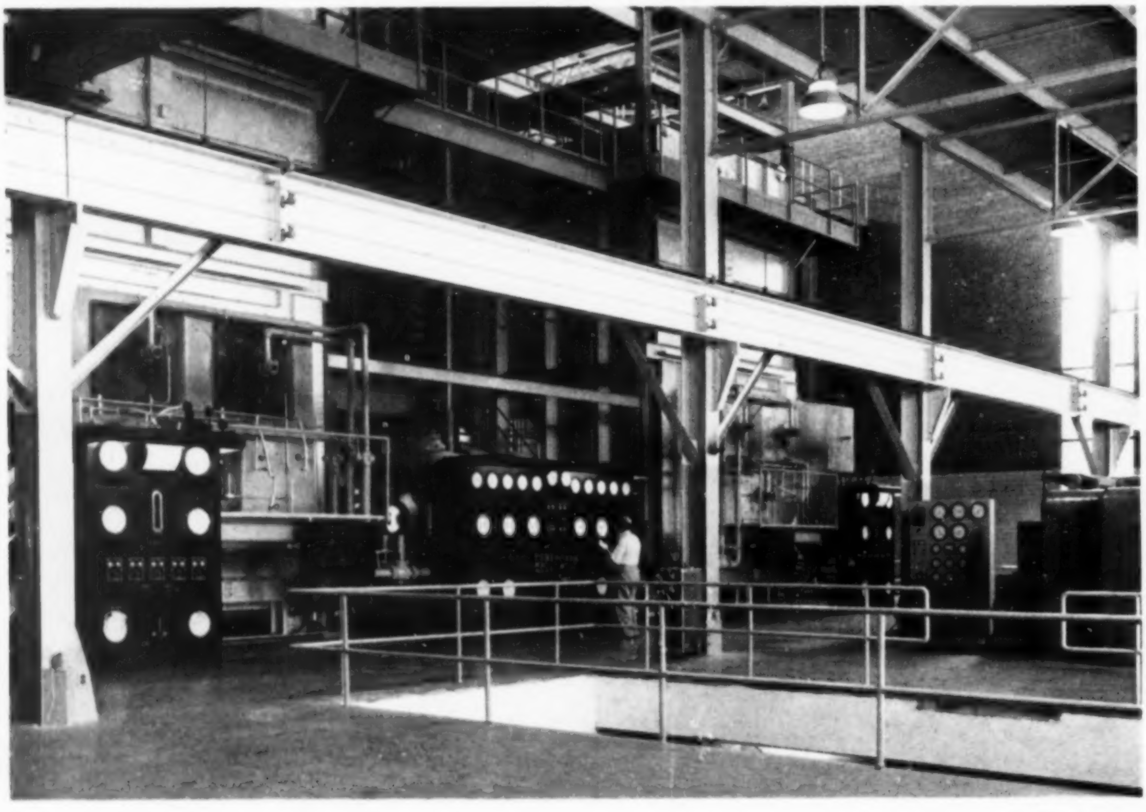
The cost was approximately \$2,000,000, including the central air-conditioning plant but not including the distribution system. Additional photographs appear on the following pages.



OPERATING FLOOR PLAN



Continuous motor operated windows near the roof lines and other well placed windows admit an abundance of natural light. The operator can view most of the controls from a central point in front of the master boiler panel. Above: Induced draft fan and ductwork; below: boiler and control panels on main floor.



CASUALTY INSURANCE

Why carry it?

T. E. BLACKWELL
Vice Chancellor and Treasurer
Washington University

ACCORDING TO THE *Chicago Daily Tribune* of Jan. 30, 1953, a $500,000 suit against Northwestern University by a former student, William A. Rice of Wilmette, Ill., for injuries suffered when he dived into shallow water off the university's lake beach pier on May 5, 1949, was settled out of court for $40,000 after the circuit court jury had been given final instructions by the presiding judge.

In his suit, Mr. Rice charged negligence by the university in not maintaining proper beach warning signs. In his testimony, he stated that he had dived from the same spot the previous summer when the water was more than 6 feet deep. Although his attorneys admitted that signs had been placed on the pier prohibiting diving there, they asserted that the signs were weatherbeaten and not easily seen and that the university had failed to warn swimmers that the water off the pier was now less than 3 feet in depth.

By the terms of the settlement, the university and its insurer, the Continental Casualty Company, shared the cost of the settlement. The university denied legal liability in the matter and asserted that its contribution to the settlement was made upon humanitarian principles and as a contribution by the university to the welfare of a former student.

This settlement out of court reflects the effect of a very important decision of the supreme court of Illinois handed down in 1950.[1] A student in the physical education department of Bradley Polytechnic Institute (now Bradley University) was injured in a fall from a trapeze to be used in a college circus. She brought suit against the institution and was allowed to recover despite the fact that, by a long line of decisions, the trust funds of a charitable corporation in Illinois are immune from liability for the negligent acts of its employes and agents. The court refused to reverse this well established legal immunity but held that, since the university carried liability insurance, the plaintiff could receive payment from the insurance company without impairment of trust funds of the institution.

The supreme court of Tennessee, like that of Illinois, has consistently held that the trust funds of a charitable corporation may not be impaired by the demands of injured claimants, but it has permitted a plaintiff, injured at a carnival operated by an American Legion post, to recover on the ground that the profits derived from a concession incidental to the post's charitable objectives did not constitute a trust fund.[2] The same court had, in 1918, permitted a tenant in an office building owned by Vanderbilt University to recover for negligently inflicted injuries on the unrealistic grounds that the trust funds of the university would not be thereby impaired,[3] and, in 1939, permitted a hospital patient to recover from Vanderbilt on the grounds that the claim could be satisfied out of the proceeds of a liability insurance contract.[4]

The courts of Colorado[5] have also imposed liability if the charity is protected by insurance and Georgia,[5] like Tennessee, will permit recovery if the claim can be paid from assets not used directly in conducting the charitable enterprise.

On the other hand, courts in nine states have ruled that the availability of casualty insurance will not, of itself, impose liability to respond in damages for negligence.

The courts of this country that still uphold the traditional immunity of educational and other charitable corporations from personal injury claims are under heavy pressure from public opinion to permit injured claimants to recover if settlement can be made from casualty insurance policies or nontrust funds.

Just what the courts would construe as nontrust funds has been a source of considerable anxiety to college administrations and to their attorneys. Fortunately, in 1951, the courts of Illinois gave at least a partial answer to this question in the Slenker case.[6]

An automobile, driven by David W. Gordon, an officer of the Grand Lodge of the Independent Order of Odd Fellows of Illinois, collided with another car driven by Fred Slenker. Mr. Slenker and his wife were injured and filed suit against the Grand Lodge. The jury found Gordon guilty of negligence and that he was, at the time of the accident, acting as the agent of the lodge. Damages to the plaintiffs were assessed at $24,000. Apparently, neither Gordon nor the Grand Lodge carried casualty insurance, and the court was compelled to examine each fund held and administered by the lodge to determine its fiduciary character. The court opinion said:

"The various special funds for special purposes and the endowment funds for the homes for the aged are without question trust funds. The fact that the Home Tax Fund was raised by assessment on the members does not alter its fiduciary character. The capitation tax to pay the costs of administration of the Grand Lodge are trust funds. Funds used for the operation of a charitable enterprise are trust funds for that purpose."

Thus, the court came to the conclusion that all funds held and administered by the lodge for its charter purposes were fiduciary in character and therefore not available to satisfy the claims of Mr. and Mrs. Slenker. This decision should go a long way in reassuring the administrators of educational and charitable institutions in Illinois after the concern aroused by the words of the judge in the Bradley case:

"We are of the opinion that the exemption or immunity which has been afforded a charitable institution should go no further than to protect its trust funds from being taken to satisfy its liability for the tortious acts of its agents or servants."

Apparently, in Illinois, the only assets of a charitable corporation vulnerable to such claims are the proceeds from casualty insurance policies.

In the light of these decisions, why should colleges in Illinois carry liability insurance?

Moore *v.* Moyle et al., 92 N.E. (2d) 81.

Hammond Post No. 3 Inc. American Legion *v.* Willis, 165 S.W. (2d) 178 (1942).

Gamble *v.* Vanderbilt University 200 S.W. 510.

Vanderbilt University *v.* Henderson 127 S.W. (2d) 284 (1918).

O'Connor *v.* Boulder-Colorado Sanatarium Association 96 P. (2d) 835 (1939). See also 133 A.L.R. 819, 20 B.U.L. Rev. 330; 53 Harv. L. Rev. 135.

Slenker *v.* Grand Lodge I.O.O.F. 344 Ill. App. 1 (1951).

ROBERT F. MENKE
Director of Placement and
Associate Professor of Education
Arizona State College, Tempe

ERLE WHITING
Assistant in Charge of Student Placement
Placement Bureau
Arizona State College, Tempe

PLACEMENT SERVICES

for students and graduates are unified

WHEN INSTITUTIONS OF HIGHER education were small and when many services of the institutions were organized because of student demand, generally they grew apart or under the administration of some unrelated and uninterested division or department. As institutions grew and as the institutions studied their organization, a definite trend was established whereby a group of related services was consolidated and integrated under one administrative head.

This consolidation and integration usually has succeeded in providing better services to the students and to the institution's clientele. For example, our institution has authorized a move whereby the student and graduate placement has been unified into a single service under one administrator. This move, it is felt, will permit the placement office better to meet the needs of all the students of the institution and at the same time promote relations with the employers.

FOUR AIMS

As the move was being made a statement of policies concerning student placement was undertaken. This was considered essential in order to facilitate a smooth transfer of functions. Basically student employment was organized to accomplish four important aims. First, it was felt that student placement should make it possible for deserving but financially handicapped students (residents of the state) to attend college; second, to provide assistance to the staff at the college; third, to provide the student with an educational work experience and, fourth, to provide part-time help in the local area.

General policies that were formulated to govern the administration of the student placement program included the following:

1. All students employed by the college must be assigned real jobs and must meet the responsibilities assigned to them, or they must be reassigned or discharged.
2. Students who are discharged for inefficiency will not be eligible for future employment.
3. Unless relieved for unsatisfactory performance, each student who accepts a job assignment is expected to continue working until the end of the semester for which he is hired and should plan his schedule accordingly.
4. Employes who resign prior to the end of the semester, unless such resignation is due to an emergency or condition beyond his control, will not be considered for future employment.
5. All students employed must be desirable campus citizens.
6. All students employed under this program must maintain satisfactory scholastic average. (A "C" grade is recommended as satisfactory.)

The program of placement was designed so that all applicants were classified in order of priority for assignment by the student placement office. Several factors entered into this classification. All other things being equal, residents of the state were given priority over nonresidents. All other things being equal, students who had a greater financial need in order to obtain an education were given priority over those who had less need.

For example, a student who keeps a car for pleasure while attending college cannot be considered to have a great financial need and will, for this reason, have a low job priority. Likewise, a student who must travel a distance to college or who must pay room and board at the college will generally have greater financial obligations and,

therefore, have a higher priority than students who can live at home. Too, all other things being equal, students receiving government assistance will be given a lower priority than those not receiving such assistance. Finally, all other things being equal, a student whose educational and vocational plans can be coordinated with and supplemented by the work experience will be given priority over those who gain little from the work except money. In general, a student with a lower priority will not be assigned a job until those applicants with a higher priority have been placed.

When a student applies for work, a written application is completed and a personal interview is scheduled. As a result of this interview and application, a priority is assigned to the applicant. At the time the student is referred for employment he is given what is known as an "employment certification" card. If the student is employed, the employer initials the card and it is returned to the student placement office.

A special procedure is set up for on-campus employment particularly where the institutional budget is involved. Any division or department that has a student wage budget is informed by the student placement office, prior to the beginning of the first and second semesters of school, the number of student employes authorized on the basis of its budget limitations. At no time does the number of employes during a semester exceed this budget figure without the approval for additional funds from the appropriate administrative official first being obtained. Notification of this approval is sent from the controller's office to the student placement office, where the change in budget is noted.

MAXIMUM WORK WEEK

The student placement office makes recommendations for all positions. In the event the employer feels that none of the students recommended is qualified, he may request permission through the student placement office to engage a person who meets the employer's requirements. Approval for such persons must be passed on by a committee on student placement. The hours of work are prescribed by the individual employer according to his needs and the student's free time. A maximum of 20 hours of work is permitted. Students are entitled to all school holidays, but the work hours must be met as contracted by the student.

Every effort is made to place students in jobs that supplement their educational and vocational choice. Every employer is requested to evaluate the work of the student employe. This evaluation is placed in the student's folder and it becomes part of his permanent placement folder when he graduates and is seeking permanent employment. This record from student placement is an important factor in helping to know the interest, qualification and caliber of the student. When these records, along with the other material from graduate placement, are compiled we have a comprehensive record concerning our students and, as a result, our placement becomes nearer the ideal of finding the right position for the right graduate.

Benefits from this integration of services are many, and it is recommended for colleges and universities that are interested in providing better services to students and employers.

Points on the preparation of a

FACULTY HANDBOOK

KEITH M. GRAY
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GOOD EMPLOYE RELATIONS IS CERtainly a part of good public relations. The publication of a good faculty handbook will improve employe relations by giving employes knowledge of facts that concern them and by showing them how they fit into the organization.

REDUCES GRIPES

A handbook can do much to reduce gripes and misunderstandings among employes, thus improving employe relations through the better feeling they will have toward the employer. This better feeling will certainly be a part of improved public relations with the business office of an institution and the institution itself.

In a small college it is often impractical and uneconomical to have separate manuals for faculty and for nonacademic employes; therefore this discussion will be based on the assumption that the book will cover information vital to teaching faculty as well as to nonacademic employes.

Objective. The preparation of an employes' handbook should accomplish a twofold objective: (1) It should establish a definite, clear-cut personnel policy so that every employe will understand his rights and benefits; (2) it should improve administrative procedures and show each employe how to make use of services the college has to offer.

Expected outcomes. It is expected that an employe handbook will accomplish many things: It will give each employe a sense of belonging. It will do much to build better morale and instill confidence in the college administration. It will avoid confusion and misunderstanding regarding the operation of administrative procedures. Each employe will know where he stands regarding his place in the organization, his pay, his benefits, his obligations, and his relationship to the college.

Procedure to be followed. Considerable research will need to be done to accomplish, accumulate and verify all data to be included in the handbook. Numerous individuals and groups will need to be consulted for verification of data and concurrence of established policies. Many decisions regarding new policies to be established and old policies to be revised and clarified must be underaken.

Prepared as part of the requirement for credit in the workshop for college business management at the University of Omaha, August 1952.

Probably the best plan to be followed in beginning such a project will be to appoint as editor and coordinator some individual who knows the organization and history of the college well, who has the time to devote to the project, and who has the ability to express ideas clearly and concisely. His first step should be to prepare a rough draft of each part or section. Each part should be prepared as a separate unit so that it can be submitted to the individual who is most familiar with what the section covers. Each of these persons should be instructed to study the section he receives carefully, to make the changes or corrections he feels necessary, and to give his suggestions for inclusion in the final draft. It is possible that a section may have to be submitted to several persons or to a committee of all concerned in order to make sure everyone is in agreement and that all data are correct.

All should be encouraged to return sections to the editor as soon as possible so that undue delay can be avoided. The editor will need to exercise some sort of follow-up so that sections do not get lost or buried beneath other work. After everyone concerned has had a chance to check and add his bit, another rough draft should be drawn up. This time it should be in the form of the whole and should include new suggestions, additions and corrections as suggested by those individuals to whom the various sections were sent.

This draft should go to a representative committee of faculty and nonacademic employes so that the employes as a whole will feel that they have had a part in preparation and can say, "This is our program."

Last visit of the handbook before its publication is to the board of trustees, which must endorse the whole as a statement of policy.

The draft then should go first to the business manager, to the president, and last to the board of trustees or to a general meeting of these persons so that they may have a chance to make corrections or additions and to verify and endorse the whole as a statement of policy.

About all that remains now is for the editor to edit this draft and to prepare it for publication. At this point an enabling statement or resolution should be drawn up for signature by the president, which will give the manual the authority it needs to be official.

In some colleges it may be desirable to use a committee or an organization rather than an individual as editor. Regardless of who does the coordinating or editing, the procedure to be followed and the end result should be the same.

The contents. The style of writing should be free and informal. The manual should be small enough in size so that it can be easily carried. Clever illustrations should be dispersed throughout so that it will be enjoyable and interesting to read.

At the front of the manual, probably on the first page, there should be a statement by the president welcoming new employes, telling them a little about the college and what its objectives are, and the purpose of the manual.

Next should appear a list of the board members and of the main administrative officers of the college. Following this, there should be a calendar of important events for the year. A table of contents will foster quick and ready use of the manual.

Every employe needs to know his position in the organization. Therefore, a section near the front of the manual should be devoted to the organization of the college and should list the main organizational units and briefly outline their main functions.

Following the section on organization, it would be well to give a brief history of the college and to mention some of its traditions. Some idea could be given in this section as to where funds come from to operate the college and pay salaries.

Virtually all of the next section would deal with policy matters pertaining to salaries, work conditions, employe rights, and employe benefits. Following is a list of items to be included: (1) hours of work of nonacademic employes; (2) work load of faculty and administrative employes; (3) duties related to serving on committees by faculty and administrative employes; (4) length of work week of nonacademic employes; (5) vaca-

One section deals with policy matters regarding salaries, sick leave, hospital insurance, and the like.

tions; (6) holidays; (7) sick leave; (8) reports of absences; (9) outside employment; (10) overtime; (11) employment of relatives; (12) physical examinations; (13) disability compensation insurance; (14) hospitalization insurance; (15) retirement—T.I.A.A. and social security; (16) employe attendance of college classes and training on the job; (17) tuition remittal for members of employe's family; (18) use of the library; (19) cashing checks; (20) housing; (21) payment of rentals on college owned properties occupied by employes; (22) smoking; (23) use of college facilities; (24) mail and messenger service; (25) telephone and telegraph service; (26) out-of-town travel; (27) pay days; (28) student employment; (29) attendance at athletic events and at other college events; (30) fine arts series; (31) college civic theater; (32) college civic chorus.

The last section of the manual would include procedures to be followed in getting things accomplished, such as (1) employment procedures, or how to go about getting an employe or student help to fill a vacancy; (2) purchasing and requisitioning procedures; (3) budget and budget reporting procedures; (4) use of audio-visual aids and rental of films; (5) reporting procedures required by faculty; (6) printing and duplicating of tests and test security; (7) assignment of classrooms and offices; (8) moving office and classroom furniture; (9) maintenance and service to campus facilities and college owned houses.

PRACTICAL INVENTORY CONTROL

for college stores

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WHENEVER A GROUP OF COLLEGE store managers gets together to discuss mutual problems, it is quite probable that the conversation eventually will turn to inventory. All retail stores have inventory problems, but the average college store operates in a manner that tends to increase these problems. Its operations differ from the operations of other types of retail stores in several respects. Here are three:

1. Type of Merchandise Stocked. A large part of the merchandise stocked by college stores is merchandise required for use in college courses. If, for any reason, this merchandise is not sold to the students enrolled in these courses, it is virtually impossible to sell it to anyone else.

2. Type of Customer Served. This required merchandise is usually specified by faculty members and purchased by students with a certain amount of reluctance. Some students will be able to get by without purchasing required books by doubling up with other students or by some other method. Furthermore, there is a constant turnover among faculty members, and new faculty members seldom specify the same merchandise as their predecessors.

3. Type of Purchasing Required. Most college stores handle at least one-third of their annual sales volume in two brief periods: the start of the fall semester and the start of the spring semester. This necessitates building up large inventories for these two periods and tends to increase purchasing errors that might not be encountered if purchasing could be done on the basis of the normal 60 or 90 day requirements.

In order to meet these problems, it is essential for the college store to develop some type of inventory control that will include:

1. An accurate physical inventory method for taking and interpreting the annual or semiannual physical inventory.

2. A system for revaluating this inventory to give a true picture of its worth.

3. A unit stock control of all important merchandise to provide continuous information relative to the sales and purchases of the merchandise.

Although these factors of inventory control are listed in chronological order, the second factor, proper revaluation of inventory, requires preliminary planning so it is the first subject for discussion.

REVALUATION OF INVENTORY

It is an amazing fact that many college stores do not revalue their inventories. Every year their physical inventory includes merchandise that has been on their shelves for five or more years, and this merchandise is inventoried at full price. It is obvious that an inventory of this type does not represent true value.

Other college stores revaluate inventory by selecting certain items that have been in stock for a long time and reducing their inventory value. This is a step in the right direction, but it is far from satisfactory, since it is revaluation by personal opinion and does not follow a definite rule from year to year. It should be remembered that this surplus or obsolete stock was probably acquired as the result of the personal opinion of the same person who is revaluating it, and his opinion on revaluation may be just as much in error as it was when the merchandise was purchased.

The correct method of revaluation is a percentage system based on the age of all the merchandise in the inventory. In order to set up this system, it is necessary to code all merchandise to indicate the period in which it was purchased. Most college stores operating under this system base their code on a six-month period and use a letter to designate the period. For instance, the merchandise purchased during the first six months of a fiscal year is coded "A" and during the second six months is coded "2A." The following year the code is "B" and "2B" and the coding continues in this manner. When the physical inventory is taken, this code is included with the price and description of the merchandise and, after the inventory is complete, the total can be broken down into the various age groups.

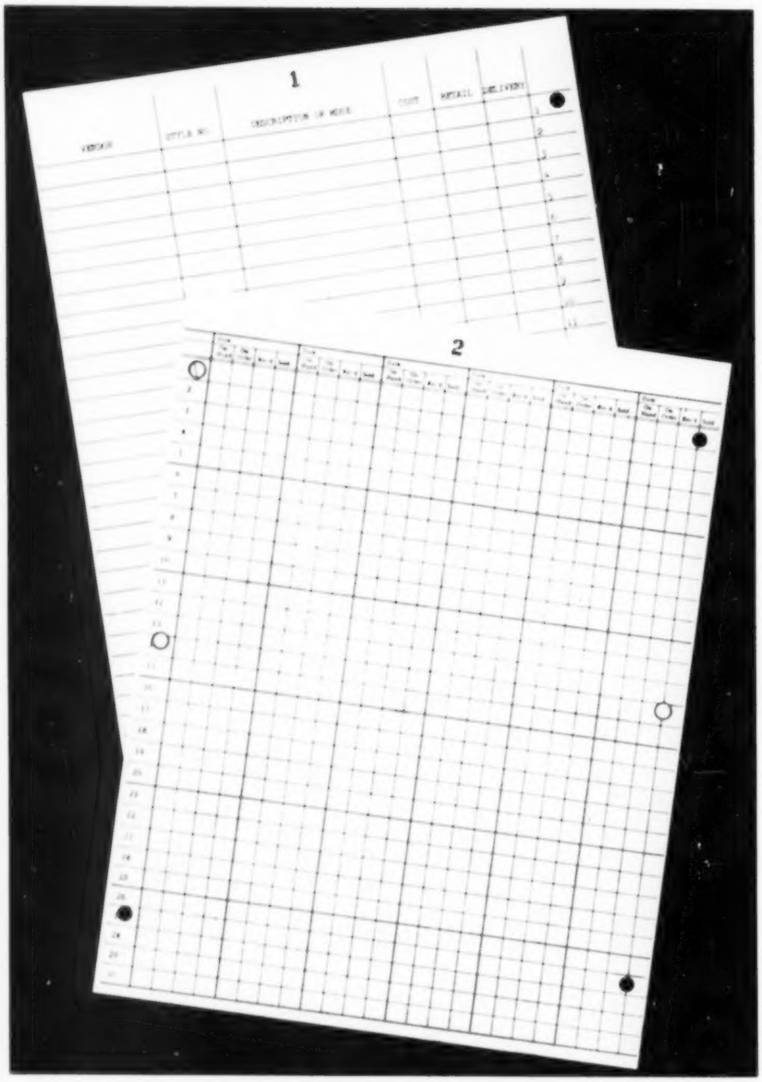
The percentages used for revaluation of inventory will vary with individual stores. A fairly lenient system of revaluation might analyze the inventory as follows:

Age (Months)	Actual Cost	Rate of Depreciation %	Market Value
12 or less	$25,000	0	$25,000
12 to 24	5,000	25	3,750
24 to 36	1,000	50	500
Over 36	200	100	0
	$31,200		$29,250

A more drastic system of revaluation might show the following results:

Age (Months)	Actual Cost	Rate of Depreciation %	Market Value
12 or less	$25,000	0	$25,000
12 to 24	5,000	50	2,500
Over 24	1,000	100	0
	$31,000		$27,500

After the revaluation system has been established, it should be adhered to without exceptions. There is always a tendency to make exceptions for some items, but such exceptions destroy the value of the system. Under this method, a group of items are removed from the inventory each year, and it is usually advisable to segregate these items and to list them. In case the store is subject to federal income tax, the total cost of this stock can be deducted as abandoned merchandise but the Internal Revenue Department requires that such deductions be in accordance with established practice, and this is another argument for set-



These two stock control sheets are designed for use in a three-ring notebook. Sheet No. 1 has space for 30 items; it is placed on the left side of the notebook. Sheet No. 2 provides stock records for each of these items for six periods and by reversing this sheet an additional six periods are available. So if the stock is checked once a month the record will last for a year. After all the spaces on Sheet No. 2 are used, another sheet can be inserted on top of it, so records for a long period of time are available.

ting up a definite revaluation system and adhering to it.

Now to revert to the first factor of inventory control, the taking of the physical inventory. There are several methods in use, including calling the inventory to a tape recorder and having it transcribed from the tape by a stenographer. This method has worked well for some stores or departments.

The commoner inventory methods are the use of individual slips or cards for each item or the use of inventory sheets. When cards are used, they are assembled and alphabetized, and the inventory book is written from the cards and the prices are extended. When inventory sheets are used, these sheets are assembled and comprise the inventory book, and it is necessary only to extend the prices.

In order to use inventory sheets accurately, it is necessary to chart each shelf, bin and fixture where merchandise is stocked and to assign it a number. Next, the inventory sheets are numbered consecutively and a sheet number is assigned to each shelf. The number of the fixture and the number of the sheet assigned to it are listed on a master chart.

Just before inventory, the inventory sheet that has been assigned to each shelf or bin is placed thereon and, on inventory day, the merchandise on the shelf is listed on this sheet and the sheet replaced on the shelf. Usually, the manager collects these sheets after the inventory and he can spot-check some shelves at that time. Every sheet must be accounted for, and it is easy to determine if any shelf has been missed.

This system of taking inventory can be recommended, since it eliminates two common inventory errors: failure to inventory a section and inventorying the same section twice. In addition, it eliminates the labor of writing up the inventory book and makes it easy to recheck items where the count or the pricing seems to be inaccurate.

The third factor of inventory control is a unit stock record for certain departments or for certain merchandise in a department, and this requires periodic counting of the merchandise. The maintenance of such a record is not as difficult as some people imagine, and it is of great importance in checking excess inventory and also inadequate inventory.

For example, a unit stock control can be set up for athletic goods on a quarterly basis, since this merchandise conforms quite closely to the seasons. There are many types of stock record sheets available and the minimum requirements provide space for listing the item, the quantity on hand at the beginning of the period, the quantity purchased during the period, the quantity sold during the period, and the quantity on hand at the end of the period. An example:

	Footballs	No. D1938
July 1	—On Hand	2
	Purchases	12
	Sold	6
Oct. 1	—On Hand	8
	Purchases	0
	Sold	7
Jan. 1	—On Hand	1

Other types of merchandise may require stock control on a monthly basis or even oftener, but, in general, any merchandise with a quick turnover, such as cigarets and candy bars, does not require stock control.

These comments on inventory control are far from complete. For instance, there is no mention of the retail method of inventory that is becoming more and more popular with college stores or the more complicated systems of stock control that are used by a few stores. However, these comments may be of some value to the average college store with the average inventory problems.

Don't overlook the importance of

GROUND REFLECTION IN DAYLIGHTING

J. W. GRIFFITH O. F. WENZLER E. W. CONOVER

DAYLIGHT REFLECTED FROM THE ground may contribute a great deal of illumination within a building. In fact, for vertical windows, this reflected daylight may be the major source of daylight. Consequently, the assumption that daylight arrives at a window directly from the sky only is basically in error, and architectural design for daylighting as well as daylighting prediction methods should take into account this reflected light arriving at windows from below the horizontal.

The amount of reflected light depends on the light incident on the ground and the ground reflectance. The light incident on the ground can vary in intensity over a wide range depending on the sky brightness pattern and on the position of the sun. Its upper limiting value is approximately 10,000 foot-candles.[1] Ground reflectance also varies over a fairly wide range, as the reflectances of ground surfaces and ground cover commonly found in the vicinity of buildings may be in a range from 10 per cent to almost 100 per cent, with values in the range from 15 per cent to 50 per cent being commonest. Typical ground reflectances are shown in Table 1.

TABLE 1—Typical Ground Reflectances

	PER CENT		PER CENT
Grass fields, lawns	18-23*	Snow, old	59*
Dead grass	28-32	Wild fields	26*
Meadows in foreground	14-18*	Concrete	55†
Meadows near horizon	35*	Macadam	18†
Snow, fresh	100*	Gravel	15-35

*After Logan[2]
†After Kimball[3]

An indication of the contribution of light from ground reflections is shown by a theoretical computation for several typical conditions in Table 2.

TABLE 2—Illumination Incident on Vertical Windows From Uniformly Overcast Sky Plus Ground Reflections

Per Cent Ground Reflectance (Table 1)	10	20	30	40	50
Incident illumination from:					
Uniform sky only (ft-c)	500	500	500	500	500
Ground only (ft-c)	50	100	150	200	250
Total: Sky plus ground (ft-c)	550	600	650	700	750
Incident illumination from:					
Ground only, % of Total	9.1	16.7	23.1	28.6	33.3

This table is computed on the basis of an overcast sky having an equivalent brightness of 1000 foot-lamberts, which has been employed for many years as the basis of daylight prediction methods.[4] This sky produces 1000 foot-candles incident illumination on the horizontal outdoors and 500 foot-candles incident illumination on the vertical window. The illumination incident on a vertical surface from the ground is computed on the basis of the incident horizontal illumination and the ground reflectances shown. It will be noted that the contribution from below the horizontal ranges from 9 per cent to 33 per cent of the total incident light for the overcast sky and range of ground reflectances shown on this table.

Nonuniform overcast skies usually are brighter at the zenith, thus producing more light incident on the horizontal for the same light incident on the vertical than does the uniform sky. The increase may be of the order of 25 per cent. This makes the percentage of light from the ground roughly 25 per cent greater for the nonuniform overcast sky than for the uniformly overcast sky used in the computations in Table 2.

The contribution from the ground may be considerably higher yet for a clear sky with sunlit ground. In fact, for some conditions of sun and ground, there may be more light entering a window from below than from the sky.

This light reflected from the ground cannot be considered as, in effect, more light from the sky. The light from the ground is, instead, indirect light in a room. It reaches the work plane by interreflectance from the upper walls and ceilings. It may at times produce more light proportionately on the work surfaces farthest from the window than does direct sky light alone. It improves the uniformity of the il-

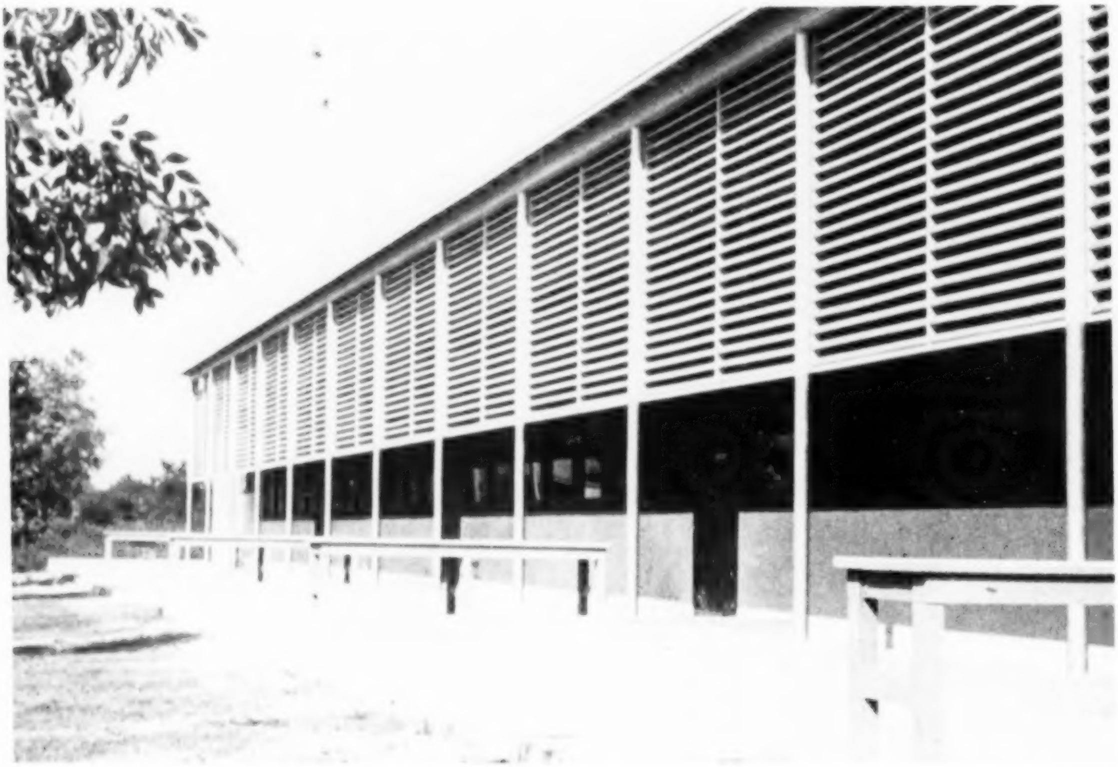
From a paper presented at the National Technical Conference of the Illuminating Engineering Society, Chicago, September 1952. Mr. Griffith is research associate at Southern Methodist University and Messrs. Wengler and Conover are industrial consultants.

[1] Benford, Frank, and Boch, John E.: A Time Analysis of Sunshine, Transactions I.E.S., Vol. 34, p. 200, 1939.

[4] Recommended Practice of Daylighting, Illuminating Engineering Society, New York, 1950.

[2] Logan, H. L.: Specification Points of Brightness, Transactions I.E.S., **34:**881 (September) 1939.

[3] Kimball, H. H.: The Determination of Daylight Intensity at a Window Opening, Transactions I.E.S., **19:**217 (March) 1924.



Above: Here bonus light comes from concrete. Outside horizontal louvers shield skylight and sunlight but allow the light reflected from the concrete to pass into the classroom. Below: Under clerestory window is a reflecting roof. An overhang shields sunlight and skylight but allows ground light to be reflected inside.

lumination in the room and it improves the brightness ratios.

Just how effectively ground light is actually utilized in a room can best be shown by a study of ground light alone. Table 3 shows the maximum, average and minimum readings of illumination on the work plane of a typical room with light coming from the ground only. These readings were taken at Southern Methodist University in a one-fourth scale model representing a 30 by 30 by 12 foot room. The sky was black for this series of tests and all of the incident light was from the ground. The fenestration was clear glass extending from wall to wall and from a 36 inch sill to the ceiling, and corrections have been introduced to allow for a 20 per cent reduction representing the effect of the mullions and muntin bars typical of metal window construction. Data are shown for 30 per cent reflectance on the floors, 50 and 70 per cent reflectance on the walls, 70 and 85 per cent reflectance on the ceilings. Readings were taken at stations representing 5 foot intervals throughout the room at 30 inches from the floor.

Values computed from actual test results are shown for 100, 150 and 250 foot-candles incident on the window from the ground alone. These represent the ground light which would be received for typical ground reflectances of 20 per cent, 30 per cent, and 50 per cent, respectively, representative of grass, gravel and concrete, if these grounds were illuminated by the 1000 foot-lambert uniformly overcast sky. They also represent the light which would be received for average ground brightnesses of 200, 300 and 500 foot-lamberts, respectively. Light received from the ground for other conditions would be proportional to the average ground brightness.

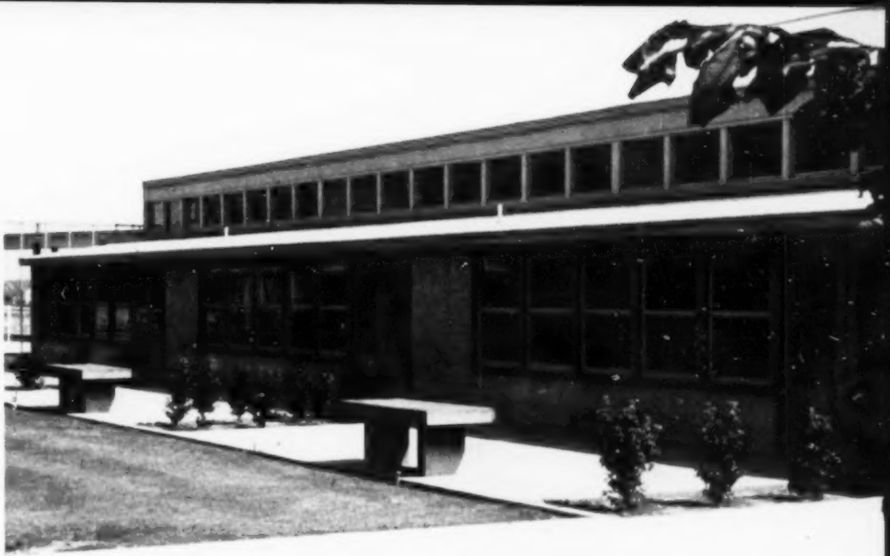
From the data shown in Tables 2 and 3 it appears advisable for comparison of daylighting installations or for daylighting prediction to evaluate the reflected light from below the horizon and add it to that received directly from the sky. It has been common practice to use a reading of the total light incident on a vertical fenestration as a basis for comparison of daylighting tests results. Such a procedure, however, does more than just neglect the added light available from the ground. It actually penalizes the installations with higher ground reflections for their more effective use of light.

For example, consider two identical rooms, each lighted by a uniformly overcast sky of 1000 foot-lamberts brightness, one having zero ground reflectance outside the window, the other having 30 per cent ground reflectance. The room with 30 per cent ground reflectance would obviously have more light on the work plane. Each window would receive 500 foot-candles directly from the sky, but the one with 30 per cent ground reflectance would receive an additional 150 foot-candles by reflection from the ground for a total of 650 foot-candles incident on the window. Since this light from the ground must be reflected from the ceiling or upper walls before being distributed to the work plane, it produces less light quantitatively on the work plane than does an equal amount of sky light. Consequently, if the readings for the latter room were adjusted to a base of 500 foot-candles incident instead of 650, the adjusted illumination values for this room would be lower than those for the room with zero ground reflectance.

In making this type of comparison, therefore, the utilization of light for the room with ground reflections has been penalized by only a fraction of its interior illumination being considered, while all of the illumination for the room having no light from the ground has been considered. A fairer comparison could be made by using an overcast sky having an equivalent brightness of 1000 foot-lamberts as a basis rather than adjusting to 500 foot-candles incident on the window.

The utilization of ground light is not a new phenomenon. It has been used for years, but many installations have been penalized by lack of its consideration. Horizontal louvers such as venetian blinds, for example, can be adjusted to shield the eye from high sky brightness when objectionable and still allow reflected light from below to pass through for indirect daylighting. Strategic location of concrete parking areas, sidewalks and light colored playground areas can be incorporated effectively into many designs. Roofs under clerestory and similar windows can be treated as reflectors to increase the amount of light reflected into the windows from below.

Light from below the horizon is a dividend from something whose only cost is good design practice.



Use of an outside classroom as a reflector. A reflecting roof under a clerestory window increases the efficiency of the clerestory window.

TABLE 3—Interior Illumination From Ground Light Only

VERTICAL ILLUMINATION	100 FOOT-CANDLES			150 FOOT-CANDLES			250 FOOT-CANDLES		
	Work Plane Illumination								
Reflection Factors*	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.
30-50-85	16.4	9.6	4.4	24.6	14.4	6.6	41.0	24.0	11.0
30-70-85	17.4	10.8	5.8	26.1	16.2	8.7	43.5	27.0	14.5
30-50-70	16.2	9.0	4.2	24.3	13.5	6.3	40.5	22.5	10.5
30-70-80	18.0	10.4	5.6	27.0	15.6	8.4	45.0	26.0	14.0

*Of floor, walls and ceiling, in that order.

PORTION CONTROL is the basis of cost control

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PORTION control is the primary factor in establishing an accurate cost accounting procedure. The num- of portions obtained from a specified amount of food permits the calculation of the cost per serving; thus all servings must be uniform in size. Such information provides a basis for ordering and predicting the food needs of the institution, as well as aiding in food cost control.

Portion control enables the food manager to plan menus that ensure nutritional adequacy according to the recommended dietary allowances of the National Research Council. These nutritional requirements determine the size of the portions of food offered the students and the staff of the institution. By calculation the dietitian determines the amounts of food necessary to meet the nutritional recommendations of the National Research Council, and thus establishes the size of the portion to be used, *i.e.* size of the serving of meat, the number of eggs used, the amount of bread, crackers, soup, milk, vegetables, fruit, desserts.

Cost conscious dietitians and food workers are interested in portion controls that are practical, attractive, economical and timesaving.

Portion control can be accomplished four ways: (1) by purchasing foods prepackaged or prefabricated in portion sizes desired; (2) by developing standard recipes with the yield calculated in portion sizes; (3) by using standard size containers for serving foods, and (4) by establishing the number of servings of food to be obtained from canned foods.

PREPACKAGED AND PREFABRICATED

Food manufacturers are marketing more of their products in prepackaged and prefabricated units. The advantages of the prepackaged unit are many. Prepackaging provides a sanitary means of handling food, cuts hours of labor spent in packaging and prefabricating in the individual institution, reduces serving time, ensures portion control, and is attractive. However, the dietitian should exercise caution in determining cost of the prepackaged or prefabricated item. The prepackaged item may be more expensive than the bulk item. In areas where labor costs are high the prepackaged or prefabricated food item will probably not be any more expensive than the bulk item. In the small food operation the prepackaged and prefabricated food item may provide a saving and certainly a more efficient operation. In every instance the food manager should carefully compare the cost of the prepackaged item with the cost of the bulk food item, considering the labor cost of packaging and serving, as well as materials used, waste and the attractiveness of the items.

Because of the advantages of prepackaging foods a goodly number of products can be obtained that meet the needs of institutional food services. The majority of biscuit and cracker companies now offer both cookies and crackers in individual packets that meet the demands of their consumers. Dairies offer brick ice cream in individually wrapped pieces, usually six or seven per quart. Very good jellies and jams are now obtainable in three

(*Continued on Page 54*)

TABLE I—PORTION STANDARDS FOR MEAT (BEEF)

Food Item	*Size Serving*	*Order*	*Cafeteria Order*	*Purchase Unit*	*A. P. Yield*	*C. P. Yield*	*Notes*
Patties	4 oz., raw or #10 d.p.	serv.	serv.	lb.		5 serv./lb. 1#/2c. raw	70% meat 30% suet
Ribs							
rolled & boned	3 oz.	serv.	5 serv. per 8 lb./pan	lb.	27-29 lbs.	2½ serv./4 lbs.	
prime	3 oz.	serv.		lb.	21-23 lbs.	2½ serv./4 lbs.	
Standing rib	3 oz.	serv.	5 serv. per 8 lb./pan	lb.	27-29 lbs.	2½ serv./lb.	
Round, bone in				each	72-78 lbs.		24% side wt.
Boneless roast	3 oz.	serv.	5 serv. per 8 lb./pan	each	54-59 lbs.	2½ serv./lb.	18% side wt. 75% round wt. 20% waste trim 45% cooked yield
Round steak sandwiches	5 oz. raw	serv.	40 serv./pan 8 serv./lb.			3 serv./lb.	
Roast beef	2 oz. cooked	serv.	8 lb./pan			6 serv./lb.	
Tenderloin strip	4 oz.	serv.	serv.	each	6 lbs.	3 serv./lb. raw 12 steaks tenderloin	2% side wt. 10% untrimmed 33% loss in trim for steaks
VEAL							
Breast	4 oz. cooked	serv.	serv.	lb.	5½-9 lbs. single breast	2 serv./lb. raw	50% cooked yield
Chops rib	1 4 oz. raw	serv.	serv.	racks	4-6 lbs. single rack	4 serv./lb. raw 18 chops/ single rack	

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TABLE 2—PORTION STANDARDS

VEGETABLES, FRESH

Food Item	*Size Serving*	*Order*	*Cafeteria Order*	*Purchase Unit*	*A. P. Yield*	*E. P. Yield*	*Notes*
Asparagus	3 spears	serv.	30 serv./pan	crate	24 lbs. 12 bunches	3 serv./#	
Beans, lima	½ cup	8/qt.	32/gal.	hamper	35 lbs.	1#-⅔# shelled (1 4/5 cup)	3½ serv./#
Beans, string	½ cup	8/qt.	32/gal.	crate	28 lbs.	4½ serv./#	
Beets	½ cup	8/qt.	32/gal.	crate	3 dz. bunches	3-4 serv./bunch	
Broccoli	1 spear	serv.	30 serv./pan	crate	42-24 bunches	4 serv./#	
Brussels sprouts	6 med.	8/qt.	30 serv./gal.	crate	12 lbs.	5 serv./#	33% waste
Cabbage, green	½ cup	8/qt.	30 serv./gal.	crate	46 lbs.	4 serv./#	30% waste
Cabbage, red	½ cup	8/qt.	30 serv./gal.	crate	46 lbs.	4 serv./#	30% waste
coleslaw	⅓ cup	10/qt.	30 serv./gal.	lb.	46 lbs.	6-8 serv./#	30% waste
Carrots (cooked)	½ cup	8/qt.	30 serv./gal.	lb.	Bu.-50 lbs. bag-50 lbs. or 4-5-6-doz./ bunches	3 ⅔ serv./#	
strips (raw)	3 strips	serv.				10-11 serv./lb.	
Celery	1/6 stalk	serv.	serv.	crate-50 lbs.	48 stalks	5 ¾ serv./lb.	
Squash, acorn	½ ea.	serv.					
Tomatoes	¼ ea.	serv.	serv.	lug	28#108 ea.	15.5 serv./lb.	
Turnips	½ cup	8/qt.	30/gal.	bushel	50 lbs.	3 serv./lb.	
Watercress	sprig	serv.	serv.	bunch	1/5 lb.	125/lb.	

VEGETABLES, FROZEN

Asparagus, cut	½ cup	8/qt.	30/gal.	package	2½ lbs.	6 serv./lb.
Asparagus, spears	5 spears	serv.	serv.	package	2½ lbs.	6 serv./lb.
Beans, lima	½ cup	8/qt.	30/gal.	package	2½ lbs.	5 serv./lb.
Spinach	½ cup	8/qt.	30/gal.	package	2½ lbs.	5 serv./lb.
Squash	½ cup	8/qt.	30/gal.	package	3 lbs.	4 serv./lb.
Veg. mixed	½ cup	8/qt.	30/gal.	package	2½ lbs.	5 serv./lb.

VEGETABLES, CANNED

Asparagus, spears	4 spears	serv.	serv.	case	24-12 oz. cans	7 serv./can
Beans, baked	⅔ cup	serv.	serv.	case	6-#10's	20 serv./can
Spinach	½ cup	8/qt.	30/gal.	case	6-#10's	
Tomatoes	½ cup	8/qt.	30/gal.	case	6-#10's	24 serv./can

TABLE 3—PORTION STANDARDS

FRUITS, FRESH

Food Item	*Size Serving*	*Order*	*Cafeteria Order*	*Purchase Unit*	*A. P. Yield*	*E. P. Yield*	*Notes*
Apples, eating	1 ea.	serv.	serv.	box	42 lbs.	100 serv.	
Apples, cooking	1 ea.	serv.	serv.	bushel	42 lbs.	2½ serv./lb.	
Strawberries	½ pt.	serv.	serv.	pint		4 serv./pt.	

FRUITS, CANNED

Apple butter	1 tbsp.	serv.	serv.	case	6-#10 can	562 serv./can
Applesauce	½ cup	8/qt.	can	case	6-#10 can	25 serv./can
Apple, spiced	1 ea.	serv.	serv.	case	6-#10 can	80 serv./can
Apricots, halves	3/2's	serv.	serv.	case	6-#10 can	26 serv./can
Blackberries	½ cup	serv.	serv.	case	6-#10 can	24 serv./can
Blueberries	½ cup	serv.	serv.	case	6-#10 can	24 serv./can
Cherries, black bing	½ cup	serv.	serv.	case	6-#10 can	20-25 serv./can
Figs, kadota	3 ea.	serv.	serv.	case	6-#10 can	35 serv./can
Fruit cocktail	½ cup	serv.	serv.	case	6-#10 can	25 serv./can
Peaches, halves	2/2	serv.	serv.	case	6-#10 can	20 serv./can
Peaches, sliced	8 slices	serv.	serv.	case	6-#10 can	30 serv./can
Peaches, spiced	1 ea.	serv.	serv.	case	6-#10 can	24 serv./can
Pears, halves	2/2	serv.	serv.	case	6-#10 can	20 serv./can
Pears, spiced	1 ea.	serv.	serv.	case	6-#10 can	40 serv./can
Pineapple, sliced	2 slices	serv.	serv.	case	6-#10 can	25 serv./can
Pineapple, crushed	½ cup	serv.	serv.	case	6-#10 can	25 serv./can
Plums	3 ea.	serv.	serv.	case	6-#10 can	22 serv./can

FROZEN FRUITS AND FRUIT JUICES

Apples	½ cup	1 serv.	1 serv.	30 lbs.	30 lbs.	2½ serv./lb.
Orange concentrate	4 oz.	8/qt.	8/qt.	case	12/case	384 serv./case
Tangerine Concentrate	4 oz.	8/qt.	8/qt.	case	12/case	384 serv./case

different sizes of disposable, sealed plastic containers.

Perhaps in time the same type of packaging could be used for individual servings of peanut butter, mayonnaise, French dressing, catsup, relish and the like. Until such time, individual paper soufflé cups should be used to assure portion control. Of course, the labor used in filling these cups, as well as the cost of the paper service, should be considered in calculating the cost of the item. Individual packets of sugar, salt and pepper can be obtained which ensure sanitary inexpensive service, plus the opportunity for public relations in printing the name of the institution on the packet. Dry cereals can be purchased in individual serving packages, with several varieties per case if these meet the demands of the institution. Hot drinks and decaffeinated coffee can be obtained in attractive individual packets that ensure a standard product upon reconstitution.

In some localities it is less expensive to purchase baked goods from commercial bakeries. Again, it is possible to establish portion control by specifying the size cakes and pies desired and by setting up standards for portion size. Cakes may be purchased by the sheet, round 8 or 9 inch, or square 8 or 9 inch. The sheet or round cake usually cuts to better advantage. Many bakeries furnish cutting guides made of wire to assure even portioning of their 8 or 9 inch pies. The food production manager will always specify the number of slices of bread per loaf; most bakeries maintain similar standards. Milk served in half-pint bottles or paper containers (states may require this by law) is another means of portion control which also affords a sanitary product.

For some time the meat packing companies have been fabricating cuts of meat for use in institutions. The institution may save money purchasing meat that is already fabricated. This, of course, depends on the size of the institution and the cost of the labor in the locality. Small institutions cannot support the services of a butcher, and must therefore expect the cook to fabricate meat when wholesale cuts are bought. This procedure, unless handled by experienced workers, can result in expensive food wastage. It is possible in certain sections of the country to obtain cheese and luncheon meats already sliced for direct use on the cafeteria serving line. Frozen vegetables can be purchased in Nos. 1/2, 1, 2 and 3 packages. The size most suitable for the food operation should be ordered, consideration being given to desirable vegetable preparation. Vegetable cookery should be staggered so that the nutrients and palatability may be preserved.

Prepackaged staples can be an aid in food preparation if the proper purchase is made. Dried milk powder can be obtained in pound packages, rather than by drum, if the use indicates that less waste will occur with pound packages. Cake mixes and dips are available in No. 1 and No. 5 packages, as well as in large quantities, thus making closer control possible. Prepackaging as a means of portion control has been applied in packaging dishwashing compounds and detergents. These can be purchased in small packets, to control usage and prevent waste.

STANDARDIZED RECIPES

It is not feasible for manufacturers to package or fabricate many types of foods; therefore portion control by the use of standard recipes must be considered. Sound, standardized large quantity recipes have been developed by home economists and food workers. It is no longer necessary for each institution to develop its own. Many of the recipes available can be adapted to the individual institution, thereby eliminating the time-consuming job of recipe development. All standardized recipes must list the yield in servings and the size of the serving if they are to be of use in portion and cost control.

Enforcement of portion control for such food items that result from standard recipes is difficult and requires close supervision. The size of the serving implement should be specified, *i.e.* size of dipper or scoop; if it is a bakery item, the number of servings per pan or the number of pieces should be noted on the recipe card. In the instance of soups and stews the number of ounces per serving should be determined. When these items appear on the menu listing, the size of the serving by the item will refresh the memory of the serving maids and enlist their cooperation in portion control. For roasts the portion size should be established and scales should be made available for weighing the first few portions to reacquaint the serving maid with the amount to give.

These portion controls, once established, provide a basis for ordering of raw food. Meats, for example, can be listed on a single page (Table 1, *p.* 50). Further work can be done to develop the same type of portion control for canned fruits and vegetables, frozen fruits and vegetables, and fresh fruits and vegetables, as well as for such miscellaneous items as mayonnaise, jellies and jams (Table 2, *p.* 52). Once this list is standardized it can be used again and again. The standard portion list should be developed for each institution individually; the portions desired for resident of a children's home are not going to be the same as those desired for patients in a mental disease institution.

STANDARD SERVING CONTAINERS

Once the standard portion list has been developed supervision is necessary to ensure that the standard size portion is served. Various means may be used to accomplish this. Standard size glasses should be available for pouring and serving juices. Standard size soup bowls will aid the serving maid in adhering to the portion setup. A small serving of food in a large bowl is not good salesmanship. Food dispensers are available that also aid in portion control. Cream dispensers can be obtained that are adjustable to dispense 1/2 or 1 ounce of cream as desired. These, of course, should be approved by the local health authorities. Milk dispensers that dispense only one glass of milk are available. Again these must have the approval of the local health authorities. A new frozen concentrate juice dispenser will soon be available that mixes the concentrate with water in the correct proportions as it is poured. Coffee cups will also be a uniform size. Specified sizes of paper soufflé cups and paper drinking cups are important tools in portion control, as well as an attractive way of serving food.

CANNED FOOD CONTROL

Perhaps the easiest way to begin portion control is to determine the size and the number of servings of food obtained from canned goods. Commercial canneries use standard size cans, and thus it is possible to calculate just how many servings of sliced peaches will be in a No. 10 can, No. 2 1/2, and so on. Again, once the portion has been developed, the chart becomes a permanent reference for the food worker and the serving maid. Revisions keep it up to date and pliable (Table 3, *p.* 52).

NEWS

Recommendations on Sponsored Research . . . Industrialist Suggests Plan for Financial Aid to Colleges . . . Private Giving Hits All-Time High . . . Asks Release of Housing Loan Funds, More Study of G.I. Bill

General Foods Head Suggests National Plan for College Aid

EVANSVILLE, IND.—Creation of a national organization to cope with the financial problems of higher education was suggested recently by Austin S. Igleheart, president of General Foods Corp., in a speech at a regional meeting of the Associated Colleges of Indiana, one of 27 state organizations of colleges set up to help them meet their growing financial needs.

Mr. Igleheart commended the association and its counterparts in other states for bringing college administrators and businessmen to a "sorely needed mutual understanding." He pointed out, however, that both the increased financial needs of education and business philanthropy are national in scope and that the problem may therefore be approached on a national level.

Outlining the problem, Mr. Igleheart said:

"Our private institutions of learning have come up against an urgent need of some secure source of financial support lying outside of public taxation. The need can only become the more urgent as our population increases and as we reach toward higher standards of education.

"Businessmen have been quick to see that business has its own stake in higher education. They see that as our private capitalism evolved into public capitalism private fortunes are dwindling in size and number and no longer are the big tap for private colleges. . . . I refer, of course to the financial resources of our larger companies. . . . More and more men reasoned that these resources are the only remaining reservoir of security for private colleges as such."

The first responsibility of corporate administrators, Mr. Igleheart emphasized, is to their companies and their stockholders. "The owners of business," he said, "are not too heartily inclined to let managements decide on extensive philanthropies. Except where management can point to definite benefits accruing to the company operation and its owners from educational philanthropies, it will be difficult to get stockholder approval. Businessmen, by their nature, will ask a number of pointed questions about educational institutions in determining the best method for establishing financial aid. They will question whether distribution of funds is equitable, what types of institutions merit support, the extent to which sentiment has been a factor, and the needs of society."

His study of the problem, Mr. Igleheart said, has led him to these five conclusions:

1. "As to higher education's need for additional and new financial sup-

(*Continued on Page 66*)

Emory University Votes to Admit Women

ATLANTA, GA.—Beginning next fall, Emory University will become completely co-educational and by this action will break a tradition of its 116 year history, according to Dr. Goodrich C. White, president. The action was taken at a special meeting of the board of trustees following resolutions from the university senate and the faculty favoring co-education.

Dr. White declares that the institution does not plan to build more dormitories, add new courses, change its educational structure or become larger because of the decision to open the doors to women. The university will still limit enrollment and place the emphasis on quality, the president indicated. The first women to be admitted will be those from the Atlanta area who can live at home or from elsewhere who can find approved accommodations in the community

Sees Needed Aid Yet Serious Hazards in Sponsored Research

WASHINGTON, D.C.—The American Council on Education last month released a preliminary report of its committee on institutional research policy, containing sweeping recommendations to colleges and universities, government agencies, industrial concerns, and foundations on the conduct of sponsored research.

President Arthur S. Adams emphasized that the recommendations are tentative and that the final report of the committee will embody a careful study of comments from all the groups involved.

Noting that colleges and universities are receiving approximately $150,000,000 a year for support of research from the federal government, and that contributions from industry and foundations have been steadily increasing, the committee recognizes that such support has clearly expanded the volume of research, has made a large contribution toward the advanced education of students, particularly in scientific fields, and has increased the output of scholars. Continuing large-scale support of basic research, says the report, is vital to the national welfare.

On the other hand, there are serious hazards, according to the committee, in the current program of emergency research for specific practical purposes. Such a program may "divert the scholars in our universities from basic research," "divert an improper amount of attention and interest from the educational program," "emphasize certain fields of knowledge at the expense of others," impede creative work by demanding special control and accounting procedures, and place the institution in a situation "financially embarrassing or disastrous" if contracts are

(*Continued on Page 60*)


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NEWS. . . . . . .

(Continued From Page 56)

cancelled. The report includes specific recommendations both to educational institutions and to government agencies designed to minimize these hazards.

Government agencies are urged to remove emergency classified military research projects from the colleges as soon as possible, to distribute research contracts more widely among institutions, "to contract on the basis of full costs" in line with the policy of the Department of Defense, and "to give greater recognition to the crucial importance of fundamental research as the essential basis for long-range programs of scientific and cultural development." Similar recommendations are made to foundations and industry.

The report contains the results of studies begun by the committee in July 1952. Chairman of the committee, which includes college presidents, vice presidents for research, business officers, and active research workers, is President Virgil M. Hancher of Iowa.

Private Giving at All-Time High for 1951-52 Period

NEW YORK CITY.—Private philanthropy for higher education reached a new high level in 1951-52, according to a study of gifts and bequests to 51 major colleges and universities, published last month by John Price Jones Company, Inc., consultants and managers for institutional financing.

Current gifts received by the 51 institutions under study totaled $91,062,000 in 1951-52, the largest amount reported in any single year by these institutions since the inception of the study 32 years ago. The increase was 3.2 per cent over the previous year.

Bequests to the institutions included in the study reached a total of $30,667,000 in 1951-52, an increase of 42.5 per cent over the previous year. The total of gifts and bequests was $121,729,000, an increase of 10.9 per cent over 1950-51. Since the end of World War II in 1945 gifts and bequests to these 51 institutions have reached $637,406,000, or approximately 35 per cent of the total sum of $1,825,870,000 received in the 32 years the study has been in progress.

In 1951-52, 11 institutions received contributions in excess of $5,000,000, totaling $78,525,000, or 64.5 per cent

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NEWS. . . . .

of the total giving to the 51 institutions, and an increase of 16.1 per cent over the $67,652,000 received by them in 1950-51.

The five leading beneficiaries were as follows: Yale, $13,624,000; Harvard, $11,778,000; Massachusetts Institute of Technology, $6,953,000; Columbia, $6,735,000; Cornell, $6,375,000.

Mount Holyoke was the leader among the nine women's colleges in 1951-52, with total gifts and bequests of $1,385,000, followed by Vassar with $1,186,000, and Wellesley with $688,000.

Pacific University Has Staff Upheaval

FOREST GROVE, ORE.—Dr. Walter C. Giersbach, president of Pacific University here, was recently placed on leave of absence with pay for six months by the trustees. Dr. Giersbach has been appointed a state senator to fill an unexpired term. Edwin T. Ingles also was relieved of his duties as vice president and secretary of the board. Dr. Giersbach is not expected to return to his university duties. Mr. Ingles' contract expires at the end of the current school year.

The trustees of the university, headed by Justice George Rossman of the Oregon supreme court, appointed a committee of three to administer the university and study its problems.

The action of the trustees followed presentation of a petition signed by 42 of the university's 45 faculty members in which they accused Dr. Giersbach of maintaining an "atmosphere of distrust and subversion." The faculty petition was described as having resulted from many grievances but was precipitated by "current financial crises."

Rochester Women's Center

ROCHESTER, N.Y.—Officials of the University of Rochester recently released plans for its new $4,000,000 women's center to be built at the men's college as a step to combine the men's and women's campuses of the university. The center will include housing for 450 students, a physical education building, and a swimming pool. Construction of the center will begin this summer and the buildings are expected to be ready for occupancy by 1955.

NEWS. . . . . . .

A.C.E. Favors Further Study of P.L. 550

WASHINGTON, D.C.—A recent survey by the American Council on Education in regard to financial provisions of the Korean G.I. bill (P.L. 550) indicated that no amendment should be supported at this time by the council. Copies of the questionnaire were mailed to presidents of 1686 colleges and universities, excluding women's colleges. Replies were received from 948 colleges and universities, though 40 institutions did not vote on the alternatives suggested or did not suggest other plans.

One alternative proposed that no amendment modifying the financial provisions for educational benefits under Public Law 550 should be supported until sufficient time has elapsed to permit critical evaluation of the operation of the present law. A total of 503 institutions responded on this question; 252 member institutions supported this alternative and 251 institutions not members of the council voted in favor of this proposal.

A total of 178 institutions replied to the second alternative which proposed that the financial provisions for educational benefits under P.L. 550 should be retained.

A third group supported the alternative suggested that there should be action taken to seek enactment of the Nixon amendment or a substitute which would embody the same principle. There were 223 institutions that supported this proposal.

Board and Room Rates Increase $25 at Michigan

ANN ARBOR, MICH.—Increases of $25 a semester in board and room rates in University of Michigan residence halls were recently approved by the regents.

President Harlan Hatcher said that the increase, effective for the 1953-54 year, will bring the average charge for a double room to $700 for room and meals for two semesters. The present figure is $650.

"The essential fact to be recognized is that board and room charges, including the increase authorized today, are 46 per cent above the 1946-47 charges but that expenses for next year will be 57 per cent higher than they were seven years ago," President Hatcher said.

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☐ Please send me the report on ventilating glass block panels.

☐ Send the booklet "Better Light for our Children."

Name________________________

Address________________________

City__________________Zone______

State________________________

WITH MORE AND MORE schools using Insulux Glass Block® for better daylight distribution, Kimble Glass Company wanted to be able to recommend ventilation practices that would keep pace with this modern method of daylight control.

The Texas Engineering Experiment Station tested a wide variety of schoolroom designs to determine the best methods of ventilation when using an Insulux Fenestration System.

If schoolroom ventilation is a problem that concerns you, you'll want a copy of the test report. Just mail the coupon. And, if you don't yet have a copy of "Better Light for our Children"—the 24-page booklet that describes the advances being made in the field of schoolroom daylighting—just check that box, too.

KIMBLE GLASS COMPANY

Toledo 1, Ohio

Subsidiary of Owens-Illinois Glass Company

(*Continued From Page 56*)

port, we are more and more in the *know;* as to the machinery for corporate contributions to that support, nobody has the *how*.

2. "Corporate management could well do with some over-all device for collecting and disbursing its contributions to support of higher education—to assure reward for merit, to avoid favoritism, and to encourage education in general. The possibilities that such a device could be made to work *nationally* have not been explored to any appreciable extent.

3. "The need calls for long-range planning. It will take long-range planning to give corporate management the sorely needed know-how.

4. "Whatever the device of corporate contribution, it may be of split function, as would be the case if business organized on a broad basis to collect funds and schools organized likewise to receive and distribute funds. The obvious alternative is a single organization of businessmen and educators.

5. "Business needs to look with all its social consciousness at this predicament of higher education in order to make sure its responsibilities are being met. The case against some of our past performance hasn't been dismissed. We're still under trial."

Urges Release of Housing Loan Funds

WASHINGTON, D.C.—Reports made by representatives of the college housing program of the Housing and Home Finance Agency and the U.S. Office of Education indicate that within the 18 months of the program 162 applications have been received requesting $131,000,000, and approximately $91,000,000 has been loaned or earmarked. This leaves a balance of only $9,000,000 of the $100,000,000 released.

The American Council on Education's committee on relationships with the federal government took cognizance of this report and unanimously approved the following recommendation for transmittal to the President and the agencies involved.

"That the College Housing Program, established as a $300,000,000 revolving loan fund in Title IV of the Housing Act of 1950, has proved itself a sound and useful program for financing student and faculty housing at colleges and universities;

"That the reasons for the restrictions of the program by the executive branch to $100,000,000 and to projects directly connected with the defense effort, *i.e.* control of materials and inflations, are no longer significant factors;

"That all American colleges and universities are contributing to the long-range effort, and the housing needs of American colleges and universities are an urgent problem which must be solved both to take up the 20 year construction lag and to provide for the increasing enrollments of the next decade; and

"That this committee urges on the executive branch of the federal government the complete support of this self-liquidating program, the lifting of the defense restrictions, and the release of the remaining $200,000,000, making the full $300,000,000 authorized by Congress available as a revolving fund."

NEWS. . . . . . .

Western Business Officers to Meet in Victoria

VICTORIA, B.C.—The fifteenth annual meeting of the Western Association of College and University Business Officers will be held at the Empress Hotel here on May 10 to 12. George Green, business manager of California Institute of Technology and convention chairman, says this will be the first time the annual meeting has been held outside the United States.

Robert W. Fenix, business manager of Willamette University and president of the association, will preside at the opening session on Sunday evening, May 10. Harold W. Herman, editor of COLLEGE AND UNIVERSITY BUSINESS, will speak on "Whose Business Is College Business?"

The official opening of the convention will be held Monday morning, May 11, when association business will take a substantial portion of the program.

"Student Insurance, Employe Accident and Health Insurance, and Other Insurance Trends" will be discussed at the Monday noon luncheon by Virgil Howell, partner in the insurance firm of Mund-McLaurin and Co. The banquet speaker is Dr. Henry Schmitz, president of the University of Washington.

The Tuesday morning program (May 12) will include a panel discussion on new sources of private support of education by H. G. Nash, secretary of California Institute of Technology; Fred McLain, treasurer of Occidental College, and Elton Phillips, business manager of the University of Southern California.

At the luncheon program on Tuesday Dr. Halvar Haldaquist, executive vice president of the Royal University of Upsala, Sweden, will be the main speaker.

Lively Program Planned for Educational Buyers

CHICAGO.—Plans for the annual convention of the National Association of Educational Buyers at the Edgewater Beach Hotel here on May 6, 7 and 8 are progressing well, according to preliminary reports by Henry Doten, convention chairman, and Bert C. Ahrens, executive secretary of N.A.E.B.

C. F. McElhinney, vice president of the University of Houston, will pre-

NEWS. . . . .

side at the opening session when matters of particular interest to college business officers will be presented. E. W. Martin, treasurer of Hendrix College, will speak on the subject "Are You Up to Date With Your Insurance Coverage?" followed by a report on "The Washington Outlook" by J. L. McCaskill, director of the division of legislation and federal relations of the N.E.A.

John A. Pond, treasurer of N.A.E.B. and recently named director of purchasing of the University of Colorado, will preside at the Wednesday afternoon session, which will include a discussion by C. A. Rosenbrook, purchasing agent of Michigan State College on "Savings Through Salvage."

Jerome A. Gottschalk, assistant to the president of the Herbrand division of the Bingham-Herbrand Corporation of Fremont, Ohio, will present the main address at the warm-up dinner Wednesday evening when he speaks on "How to Be a Failure as a Purchasing Agent."

Forrest L. Abbott, business manager of Barnard College and vice president of N.A.E.B., will preside at the Thursday morning session, which will be devoted to talks by Carl M. F. Peterson on "Factors Influencing Construction Costs" and by F. Glenn Rink on "A Sales Manager Speaks to Professional Purchasing." Harry Wells, vice president and business manager of Northwestern University, will speak on "Higher Education Is Serious Business" at the luncheon Thursday noon.

Thursday evening's program will feature four workshop sessions on balancing the food budget, textiles, paper and printing, and the college housing loan program.

Friday morning will be devoted to additional workshop sessions on purchasing forms and procedures, a discussion of Volume I of "College and University Business Administration, and a third workshop on relief for the military property custodian.

A "Get It Off Your Chest" session for N.A.E.B. members will conclude the morning's program. The afternoon session will be devoted to association business with the president's inaugural banquet Friday night concluding the convention. Former Senator Fred A. Seaton of Nebraska will be the banquet speaker on "Behind the Scenes in '52"—a commentary on the November presidential election.

DIRECTORY OF ASSOCIATIONS

National Federation of College and University Business Officer Associations

President: Jamie R. Anthony, Georgia Institute of Technology; vice president: C. C. De Long, University of Illinois; secretary-treasurer, Irwin K. French, Wellesley College.

Association of College Unions

President: Charles D. Owens, University of Washington; secretary-treasurer: Edgar A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.

Conference: April 16-19, Claremont Hotel, Berkeley, Calif.

National Association of Educational Buyers

President: Kermit A. Jacobson, California Institute of Technology; executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.

Convention: May 6-8, Edgewater Beach Hotel, Chicago.

Association of College and University Business Officers

American Association

President: J. R. E. Lee Jr., Florida A. & M. College; secretary: L. H. Foster Jr., Tuskegee Institute.

Convention: May 3-5, Fort Valley State College, Fort Valley, Ga.

Central Association

President: Bruce Pollock, Carleton College; secretary-treasurer: C. C. De Long, University of Illinois.

Convention: May 3-5, Minneapolis.

Eastern Association

President: F. Morris Cochran, Brown University; secretary-treasurer, Irwin K. French, Wellesley College.

Convention: Nov. 29-Dec. 1, Washington, D.C.

Southern Association

President: Frank D. Peterson, University of Kentucky; secretary-treasurer: Gerald D. Henderson, Vanderbilt University.

Western Association

President: Robert W. Fenix, Willamette University; secretary-treasurer: William Milliken, St. Mary's College of California.

Convention: May 10-12, Empress Hotel, Victoria, B.C., Can.

American College Public Relations Association

President: Edward P. VonderHaar, Xavier University, Cincinnati.

Convention: June 28-July 1, Salt Lake City, Utah.

Association of Physical Plant Administrators of Universities and Colleges

President: Edward Pardon, University of Michigan; secretary-treasurer: A. F. Gallistel, University of Wisconsin.

Convention: May 11-13, Alabama Polytechnic Institute, Auburn, Ala.

National Association of College Stores

President: H. R. Ritchie, University of North Carolina Book Exchange, Chapel Hill; executive secretary: Russell Reynolds, Box 58, 33 West College Street, Oberlin, Ohio.

Convention: April 19-22, Statler Hotel, New York City.

College and University Personnel Association

President: Hedwin Anderson, University of Minnesota; secretary-treasurer: Clara Stimson, University of Rochester; executive secretary, Donald E. Dickason, University of Illinois. Permanent headquarters, 809 S. Wright St., Champaign, Ill.

Convention: July 19-22, Michigan State College, East Lansing.

National Association of College and University Housing Officers

President Kenneth D. Lawson, Michigan State College; vice president: M. R. Shaw, Cornell University; secretary-treasurer: Ruth N. Donnelly, University of California, Berkeley.

Convention: August 3-5, University of Minnesota.

NAMES IN THE NEWS


Gordon P. Freese

Gordon P. Freese, deputy reports and statistics officer for the Office of Defense Mobilization in Washington, D.C., has been named controller at Stephens College in Columbia, Mo. He will succeed **Frank W. Dearing,** controller for the last 19 years, who will conclude 31 years of service to the institution on his retirement next July 1.

Robert B. Stewart, vice president and treasurer of Purdue University, has resigned as chairman of the administrator's advisory committee on education and training of the Veterans Administration. He will continue as a member of the committee but will be succeeded as chairman by **Dr. Robert G. Sproul,** president of the University of California. During Dr. Stewart's tenure as chairman, the federal government has dispensed some thirteen billions of dollars for veterans' education and subsistence.

Max Q. Elder, former member of the public relations staff at the State University of Iowa, has been named

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director of the university news service at the University of Pittsburgh. Mr. Elder joined the University of Pittsburgh public relations staff April 1.

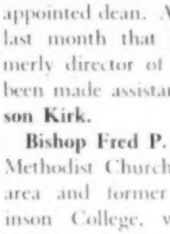
Henry W. Herzog, since 1940 controller of George Washington University, has assumed additional duties as a result of his appointment to the new university office of controller and treasurer.

Graves W. Landrum

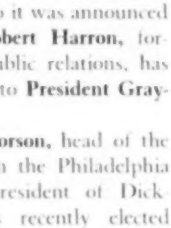
Graves W. Landrum, formerly assistant auditor of the University of Texas, has been named to succeed **Charles H. Sparenberg,** who was recently appointed controller following the resignation of **C. D. Simmons.**

R. Adm. William J. Whiteside, U.S.N. (retired), is the new director of buildings and grounds at Columbia University. He succeeds **Frederick Miller,** who retired last month after 38 years at Columbia. Admiral Whiteside joined the university staff in 1948, one year after he retired from the navy.

Dr. John A. Krout, associate provost and dean of the graduate faculties of Columbia University, was recently named vice president and provost of the university. **William C. Warren,** acting dean of the law school, was appointed dean. Also it was announced last month that **Robert Harron,** formerly director of public relations, has been made assistant to **President Grayson Kirk.**



John A. Krout



Robert Harron

Bishop Fred P. Corson, head of the Methodist Church in the Philadelphia area and former president of Dickinson College, was recently elected chairman of the executive committee of Temple University's board of trustees. In that capacity Bishop Corson, in effect, will be acting president while **President Robert L. Johnson** is on leave of absence to serve as director of the International Information Administration.

NEWS


H. G. Faulkner

Harold G. Faulkner, formerly finance officer and purchasing agent, Wheaton College in Illinois, has been appointed business manager, succeeding **Edwin J. Pittman,** who recently resigned to become a field service representative in the southwestern area. **David L. Roberts,** formerly field service director has been appointed director of public relations. He will continue to direct field service along with his new duties.

Gail A. Mills, controller of Princeton University, has been recently nominated by Controllers Institute of America to serve on the new Professional Council on Federal Financial Administration. The council, which Mr. Mills will serve in a personal capacity, is in the process of formation. Its purpose will be to extend the facilities and skills of the accounting profession to assist the federal government in the improvement of its financial administration and thereby contribute to more efficient management of public affairs. It will render advice to Congressional committees and government agencies on policies and practices with respect to accounting methods, systems for budgetary control, and other technical aspects of financial administration. It will not be concerned with taxation, governmental regulation of business, or other political matters.


Harry W. Porter

Harry W. Porter, associate professor of education at Stanford University, has been recently named by the trustees of the State University of New York to be president of the State University Teachers College at Fredonia. He succeeds **Leslie R. Gregory,** who retired Dec. 31, 1951. Since then, **Robert S. Thompson,** dean of the college, has been acting president. State University policy precludes the appointment of a president from the faculty of the same institution.

Lyndon O. Adams, formerly head of the real estate department of Northwestern University, has been named manager of a new division, the treasury department. The department will supervise investments, purchasing and stores, and the bursar's functions. As in the past, the investment department will be supervised by **John F. Norman,** purchasing and stores by **Charles N. Skidmore,** and the bursar's activities by **Royce E. Champe. Willard J. Buntain,** formerly director of dormitories and commons, has been named to the newly established post of director of university housing. This move consolidates the operation of dormitories and commons with operation of the Northwestern Apartments. **Charles Street,** formerly manager of the Northwestern Apartments, has joined the staff of the university's real estate department.

J. Edward Weaver, director of ticket sales at Ohio State University, has been appointed to a newly created post in the business office to serve as assistant to **Jacob B. Taylor,** vice president and business manager. **George R. Staten,** freshman baseball and basketball coach, has succeeded Mr. Weaver as director of ticket sales.

Miller A. F. Ritchie, chairman of the department of human relations at the University of Miami, Coral Gables, Fla., has been appointed president of Hartwick College. He will succeed **Henry J. Arnold,** who will retire as president of the New York institution on July 1.

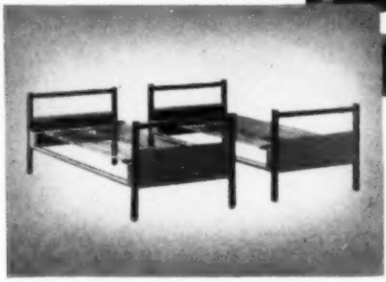
Frederick D. Patterson, president of Tuskegee Institute in Alabama, has resigned, as of June 1, to become director of the Phelps Stokes Fund. Dr. Patterson will succeed **Channing H. Tobias,** who has served as director of the Phelps Stokes Fund since it was established in 1911 by the will of the late Caroline Phelps Stokes.

Charles Ezra Beury, president emeritus of Temple University, died recently in a Philadelphia hospital after a year's illness. Dr. Beury began his career as a lawyer, was selected president of the National Bank of North Philadelphia in 1921, and then accepted the presidency of Temple at the death of Dr. Russell H. Conwell in 1925. Dr. Beury resigned in 1941.

The Rev. William A. Lynch, administrator since 1948 of the College of the Holy Spirit in Weston, Mass., died recently at 55 years of age.

Marcus Manley Wilkerson, director of the university press, Louisiana State University, died March 14 at the age of 57 years. He had been director of the press since 1935.

to meet shifting dormitory requirements...

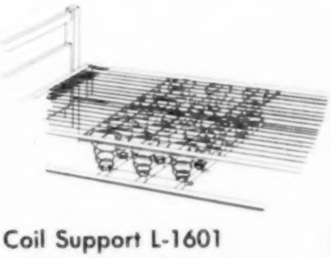


Simmons D.B.-930 demountable double-deck beds

Here's sturdy dual-purpose sleep equipment that serves equally well for double-deck bunks or as handsome twin beds . . . enables you to meet shifting demands on dormitory accommodations easily, and without extensive outlays for replacement furniture.

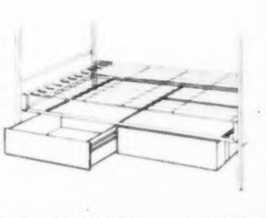
Simmons demountable Double-Deck Beds combine dual purpose practicality with the comfort and quality construction for which Simmons furniture and sleep equipment are famous: Sturdy welded steel frame, durable Simfast finish, strong steel ribbon springs. You get the finest when you order from Simmons complete line of dormitory equipment. See your equipment dealer or write your nearest Simmons display room for details.

Dormitory equipment from Simmons' Complete Line



Coil Support L-1601

provides firm support, prevents sagging. For added sleeping comfort, less spring wear.



Under-Bed Drawer F-90

clamps firmly to bed rail on both sides. Provides convenient additional drawer space for double rooms.

Simmons DB-930 · Bed with SKC ribbon fabric springs used with Duet Desk F-152-21, the single unit that supplies generous desk area for two students, F-152-5 Chest, BL-10 Ladder and BLR-10 Lee Rails.

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classified advertising

POSITIONS WANTED

Business Manager or Controller Christian gentleman; age 46 with 27 years' experience in accounting wants position with church supported college or university. Write Box CW 146, COLLEGE AND UNIVERSITY BUSINESS.

Business Manager—Administrative Assistant Intensive experience in personnel, budget, purchasing, policy planning, office procedures; 5 years manager of large student union; thoroughly familiar with all phases of food service; age 34; married; presently employed in responsible position with large corporation; resume and references sent upon request. Write Box CW 145, COLLEGE AND UNIVERSITY BUSINESS.

Business Manager or Comptroller Seventeen years experience as school and college administrator and teacher; strong accounting and management background; M. A. degree; married. Write Box CW 147, COLLEGE AND UNIVERSITY BUSINESS.

Business Manager Man, age 45; experienced; seeks position in small college, mid-west or south preferred; have also had successful fund raising experience; can be available almost immediately for right situation. Write Box CW 138, COLLEGE AND UNIVERSITY BUSINESS.

College Business Officer Presently employed as treasurer and assistant business manager of medium size college; wants position as business manager or other responsible position; 33 years old, married, children; B.B.A., M.A.; experience in finance, accounting, purchasing, and college teaching. Write Box CW 143, COLLEGE AND UNIVERSITY BUSINESS.

College or School Business Officer Diversified experience in public and government auditing, industrial and college business; strong on accounting and budgets; enjoy teaching. Write Box CW 123, COLLEGE AND UNIVERSITY BUSINESS.

College Union Director Experienced in both the management of food services and the development of student interest in the recreational and cultural activities of the college union; experienced in opening and organizing a new building; Degrees in Liberal Arts and Hotel Administration. Write Box CW 144, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Director Position wanted in larger university; five years' experience as college food director, of an enrollment of eighteen hundred and boarders of two hundred and fifty; two years at a state institution, feeding three thousand; commissary steward four years; graduate of Cooks & Bakers School; two years with B.A.; age thirty five; dependable & honest; would like change; prefer west coast, but will consider anywhere; can furnish good recommendations. Write Box CW 102, COLLEGE AND UNIVERSITY BUSINESS.

Foods Service Manager University graduate with M.S. in Institutional Management desires college residence hall position; thirteen years' experience in college food service with duties of menu planning, foods purchasing, cost accounting and general supervision of foods department; also teaching experience in food production and management. Available around September 1, 1953. Write Box CW 141, COLLEGE AND UNIVERSITY BUSINESS.

POSITIONS OPEN

Auditor-Comptroller Wanted at once or in reasonable future in Aspen, Colorado; famous year round recreational and cultural center; experience in medium or small college or hotel desirable; single man preferred. Write Box CO 108, COLLEGE AND UNIVERSITY BUSINESS.

Bookstore Manager At Eastern College; opportunity for an assistant manager presently employed to advance to manager's opening; in reply state age, education, family status, employment record for the past 5 years and send a snapshot. Write Box CO 109, COLLEGE AND UNIVERSITY BUSINESS.

Bookstore Manager Position available July 1, 1953, with privately endowed eastern university; responsibility for complete operation of university store with present volume of $175,000; in reply give personal data, resume of training and experience, salary expected. Write Box CO 106, COLLEGE AND UNIVERSITY BUSINESS.

Director of Housekeeping Mature woman with proper qualifications for supervising women's dormitories housing six hundred students; individual must be responsible for maid service and redecorating program; desirable location in Pennsylvania; co-educational college; salary commensurate with training offered. Write Box CO 110, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Manager Experienced man to operate cafeteria, snack bar, and student store in new $500,000.00 college union building at leading southern college; responsibilities will include supervision of dietitian and other personnel, food cost accounting and purchasing for all three facilities; send recent photograph and details on experience and training. Write Box CO 114, COLLEGE AND UNIVERSITY BUSINESS.

Superintendent of Buildings and Grounds— Small metropolitan denominational university on west coast; complete charge; send full details of experience and training, personal data. Write Box CO 113, COLLEGE AND UNIVERSITY BUSINESS.

The rates for classified advertisements are: 10 cents a word; minimum charge, $2.50.

Forms close 25th of month preceding date of issue.

Address replies to
COLLEGE AND UNIVERSITY BUSINESS
919 N. Michigan Avenue, Chicago 11, Ill.

WHAT'S NEW

Edited by Bessie Covert

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 104. Circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

Pictura Dormitory Group

Pictura is a new styling in Simmons steel furniture developed for dormitory and other residence housing. Pieces include twin and double beds, dressers, desks, chests, Van-D-Dressers, grip

stands and matching chairs. The lines of the new styling are smooth, with drawers opening without pulls. Roomy recesses beneath each drawer front permit easy opening. Cleaning and dusting are easier and quicker with the absence of pulls and other protrusions on the drawer fronts.

Cases in the Pictura styling are available with steel tops or with the added protection of self-banded Zalmite tops that resist burning, scratching, alcohol and marring. The rugged steel construction is designed to assure furniture that will last for years, even under strenuous conditions. The Pictura line is available in all Simmons colors and grain finishes. **Simmons Company, Dept. CUB, Merchandise Mart, Chicago 54. (Key No. 807)**

Greaseproof Tile

The new Vinylized Azphlex Greaseproof Tile is a low cost, dependable floor covering. It is designed to offer exceptional resistance to all kinds of greases and oils. The tighter texture gives a smooth surface that resists the wearing-in of grime and dirt. The tile is unusually flexible and is offered in twelve bright, decorative colors to blend with any modern or traditional decor. The marbleized pattern is distributed throughout the thickness of the tile so that it remains throughout its life. The new Azphlex Tile is available in ⅛ inch and 3/16 inch thicknesses. **Uvalde Rock Asphalt Co., Dept. CUB, P. O. Box 531, San Antonio 4, Texas. (Key No. 808)**

Fenestra-Nepco Electrifloor

A new electrified steel panel subfloor has been developed by Detroit Steel Products Company and the National Electric Products Corporation. It is of cellular, light-gauge steel construction and has a header duct system with conductors running through the cells of the floor which permits the installation of electrical outlets in each square foot of space. The cellular panels are of steel and the method of construction saves material in the panels as well as in floor construction. The unit panels can be welded together in any combination.

The floor has been tested by Underwriters' Laboratories and has received the listing and approval of this organization, according to the manufacturers, as well as being certified by the National Building Code and building codes of major cities in the United States. **Detroit Steel Products Co., Dept. CUB, 2250 E. Grand Blvd., Detroit 11, Mich. (Key No. 809)**

Korelock Panels

Korelock prefabricated, prefinished ceiling and wallpanels are designed to combine quick installation with economy, permanence and low maintenance costs. The new hollow core paneling for ceilings and walls in non-residential interiors is constructed with an interlocking wood core between two sheets of Masonite Duolux. The face of the panel has the baked Marlite finish. The back of the panel is sealed and baked. The resulting sealed panel has insulating properties, is extremely strong and stable and will remain straight under difficult moisture and temperature conditions. The wood core provides a tongue and groove design for concealed fastening.

The rigid panels are self-aligning and require no backing other than joists, studs or furring strips on masonry or partition walls, saving labor, time and material in installation. The finish is easily cleaned with a damp cloth and requires no decorating. Korelock panels are available in 24 by 48 inch and 24 by 96 inch sizes and are easily cut with regular carpenters' tools when fitting is required around windows, doors and other openings. **Marsh Wall Products, Inc., Dept. CUB, Dover, Ohio. (Key No. 810)**

Stencils for Legal Work

Two new stencils have been especially designed for the duplication of legal documents. As many copies as are needed can be prepared from one typing and proofreading. Duplication as needed can be done on plain paper and each copy is easy to read and to handle. Stencils can be filed and rerun if additional copies are needed later. Stencil No. 960-L-25485 has a double line die-impressed into the stencil about 1 2/5 inches from the left edge. Stencil No. 960-L-24067 has, in addition to the line, line numbers, double spaced, die-impressed into it. The lines and numbers reproduce on the copies when the stencil is run. **A. B. Dick Co., Dept. CUB, 5700 W. Touhy Ave., Chicago 31. (Key No. 811)**

Institutional Incinerators

Two new models of the Wincinerator have been announced for institutional and commercial use. These new incinerators are the C-10 with a ten bushel capacity (illustrated) and the C-15 with a fifteen bushel capacity. They are designed to handle wet or dry refuse and are available for a choice of fuel and with special controls. Combustion is complete and practically all smoke and odors can

be eliminated through forced draft, a special ventilating system and secondary combustion. They are constructed for installation indoors or out.

Oversize feed doors facilitate disposing of refuse. The incinerators are easily installed and are equipped with safety devices. **Winnen Incinerator Co., Dept. CUB, Bedford, Ohio. (Key No. 812)**

(Continued on page 84)

Port-A-Fold Tables and Benches

A new design in folding tables and benches for cafeteria and other temporary school seating, which can be removed from wall pockets for use where needed, is known as Port-A-Fold. The units are patterned after the In-Wall units but are lower in cost. They have plastic surfaced tops on tables and benches with steel understructure and can be detached from the pockets and moved about the room to accommodate various seating arrangements.

Both In-Wall and Port-A-Fold employ steel wall pockets and install flush with the wall or against the wall. The units constructed for against-the-wall use are especially designed for remodeling existing buildings. Units are quickly and easily set up for lunchroom or other use and as easily returned to their wall pockets when the area must be cleared for gymnasium or other classes. **Schieber Sales Co., Dept. CUB, Brightmoor Station, Detroit 23, Mich. (Key No. 813)**

Pressurized Extinguisher

Pressurized Model B is a new one and two quart vaporizing liquid fire extinguisher. It is designed for fast, one hand operation with accurate control. The vaporizing liquid is completely discharged in 17 to 25 seconds by the positive force of pressurized nitrogen in a powerful 30 foot stream. The extingisher is made with all brass precision construction. The entire valve assembly and pick-up tube unscrew as a unit from the shell to simplify inspection, cleaning and recharging. The extinguisher has Underwriters' Laboratories approval, according to the manufacturer. **The Fyr-Fyter Co., Dept. CUB, 221 Crane St., Dayton, Ohio. (Key No. 814)**

Aluminum Hardware

A full line of locks and builders' hardware of aluminum has been introduced by Yale & Towne. The new line consists of high quality pin tumbler mortise locks in four designs, a wide variety of designs of knobs, roses, thumb turn plates, cast and wrought push plates, cast and wrought pulls with plates, pull grips, flush bolts, door stops, letter hole trim and sash fasteners. Brass bolts, screws and cylinder plugs finished in dull chrome will be used with all aluminum locks and hardware.

One size mortise is standard for every type of lock used in the line, thus ensuring easy installation. Special aluminum mortise deadlocks will also be available. Expert master keying service is obtainable throughout the new aluminum lock line. Maximum security can

be achieved with master keys available for pin tumbler cylinder locks in five, six or seven pin lengths. **Yale & Towne Manufacturing Co., Dept. CUB, Stamford, Conn. (Key No. 815)**

(Continued on page 86)

Book Coating

Bookote is a transparent liquid plastic which can be sprayed directly onto book covers as a protection against moisture, stains, dirt and wear. It is easily applied, does not "bleed" inks used in printing book covers and dries quickly. Book life is extended by its use and titles and library markings on book backs are protected.

In addition to the spray type, Bookote is also available in brush type for heavy duty applications to reference books, dictionaries and other constantly used books. It is also effective in protecting light-colored fabric-embossed paper-bound books. It is available in smaller sized containers for individuals or teachers in the brush type and large sized containers for libraries. The spray type is available in a 12 ounce utility size. **Delkote, Inc., Dept. CUB, Wilmington 99, Del. (Key No. 816)**

"Gourmet" Gas Range

The new Magic Chef Gourmet Gas Range is designed for use in dormitory kitchens, small lunch room kitchens and other kitchens with versatile and heavy menu requirements. Features of the new range include stainless steel construction; six top burners, three extra large; radiant broiler; chrome polished griddle; two extra large porcelain lined ovens, equipped with automatic oven lighting and safety

pilots; fluorescent light, and two four-hour electric timers. **Magic Chef, Inc., Dept. CUB, 1641 S. Kingshighway Blvd., St. Louis 10, Mo. (Key No. 817)**

Acousti-Rail Suspension System

The Acousti-Rail is a new five piece, high strength direct-to-metal suspension system for kerfed acoustical tile. It is adaptable to a variety of ceiling requirements and affords the convenience of light weight, easy to handle members and standard erection methods. Made of high strength electro-galvanized steel, Acousti-Rail members are resistant to rust and corrosion and may be used where local codes specify incombustible materials. The design of the Acousti-Rail system makes provision for ceiling maintenance as tile may be removed and replaced without disturbing the installation. It may be used for any type of acoustical material including fiber board, mineral, glass fiber and cork. **The Mid-West Acoustical & Supply Co., Dept. CUB, 20001 W. Lake Rd., Cleveland 16, Ohio. (Key No. 818)**

Armless Aluminum Chair

An addition to the line of Rest-All aluminum chairs is a new straight, armless model for office, reception room, dormitory and side chair uses in many locations. The No. 550 combines simplified design with moderate cost and sturdy construction. It is upholstered in foam rubber, available in a full color range of U. S. Naugahyde simulated leather covers, perforated or plain, or a choice of Goodall Fabrics. Aluminum parts have a natural satin finish. **Ohio Chair Co., Dept. CUB, Youngstown, Ohio. (Key No. 819)**

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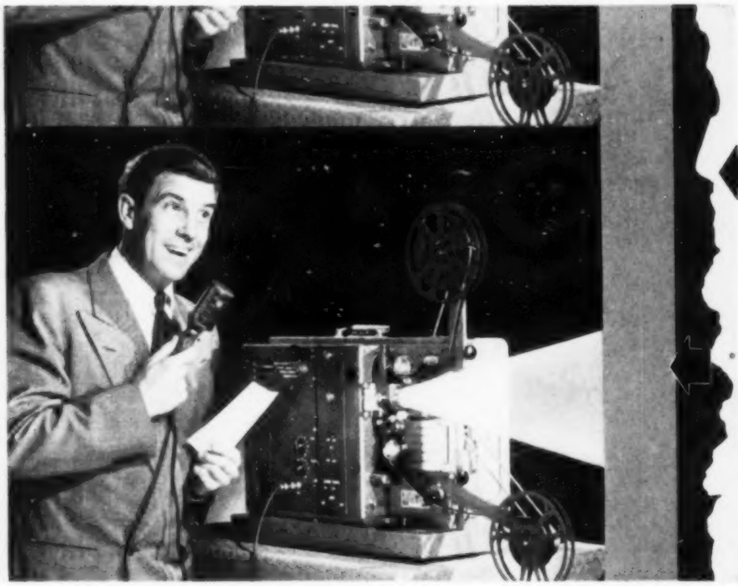


CONVENTIONAL SOUND TRACK, similar to sound track on films used in motion picture theatres, is optically recorded—cannot be changed.

MAGNETIC SOUND TRACK— added to sound or silent film for a few cents a foot—lets you record your own sound with the RCA Magnetic Recorder-Projector.

Now! Put your own sound on film

-with the RCA Magnetic Recorder-Projector

Get these nine extra values from your films

Now give added meaning to every film you show—by recording your own sound with the RCA Magnetic Recorder-Projector.

To record, you simply project a film, and speak into the microphone as you watch the screen. Erase, re-record, play back at any time.

1. **Add sound to silent films**—RCA Magnetic Recorder-Projector operates at 16- or 24-frame speeds.
2. **Make changes in present sound track**—Change from optical to magnetic sound at the flip of a switch.
3. **Add a crisp, new sound track** at any time. Prepare a complete sound track minutes before a showing.
4. **Let sound films speak 2 languages**—Use optical and magnetic sound to reach two audience levels.
5. **Personalize the message** to your audience. Mention specific situations—even mention members of the audience by name.
6. **Put training guide** on film.
7. **Replace scratched sound track** with clear magnetic sound.
8. **Get superb sound quality.** Finer sound than you've ever heard on 16mm film (80-7200 cps).
9. **Erase and re-record** at any time.

For more information write to:

RCA Visual Products, Dept. 34P,
Building 15-7, Camden, N. J.

RCA

VISUAL PRODUCTS

RADIO CORPORATION of AMERICA

ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N.J.

In Canada: RCA VICTOR Company Limited, Montreal

2 NEW RCA "400" DEVELOPMENTS FOR EXTRA FLEXIBILITY

1. **SYNCHRONOUS DRIVE** now available on the RCA Magnetic Recorder-Projector and the RCA "400" Junior or Senior projector. Lets you record or play back a perfectly synchronized sound track. Offers accuracy of control within ½ frame.
2. **MAGNETIC PLAYBACK KIT** attaches to RCA "400" Junior or Senior projector. Lets you show and play back your magnetically recorded film without tying up your RCA Magnetic Recorder-Projector. Eliminates the possibility of accidental recording or erasure. Your RCA Distributor can install it quickly.

What's New . . .

Mobile Photo Camera

A permanent record of up to 720 documents or cards can be made per hour on a continuous roll of photocopy paper with the new dual-purpose Tupper-Peerless Copy Camera. The new equipment photographs one side of letters and documents 8½ by 11 up to 8½ by 14 inches in size, and both sides of 5 by 8 inch file cards, together with a 1 by 8 inch identification strip. The entire cycle of operation takes only five seconds.

The camera is housed in a cabinet of heavy sheet aluminum with all edges finished with rounded aluminum molding. It is 18 by 52 inches in area and 52 inches high. It is mounted on a rubber-tired truck with handles and has 50 feet of cable so that it can be easily moved to be near the material to be copied. Exposed paper is enclosed in a light-tight receiver and can be removed in the light and the paper taken to the darkroom for processing. It can be cut at any point so that it is not necessary to expose the entire roll before processing photocopies of material already taken. **Peerless Photo Products, Inc., Dept. CUB, Shoreham, Long Island, N. Y. (Key No. 820)**

Stand-By Electric Plant

Engineered primarily for emergency stand-by service, the new Universal electric generating plant has a 10 KW capacity suiting it for a wide range of applications. It is available with electric starting or can be supplied with controls which automatically start the plant when regular power fails. The four cylinder air cooled gasoline engine is a feature of the new model. Maintenance needs are reduced to a minimum and the modern design of the plant makes it a compact unit saving on installation space. It can be furnished for single phase or three phase service, at either standard or special voltages, and provides a combination of low initial and minimum operating expense. **Universal Motor Co., Dept. CUB, 494 Universal Drive, Oshkosh, Wis. (Key No. 821)**

(Continued on page 90)

Bed End and Spring

The new Foster No. 4451 Bed End and RDX Spring have been developed to meet the need for attractive, comfortable sleeping facilities for dormitories and residence halls. The unit offers a stylized low height modern design suitable for a Hollywood Bed. The spring section has three rows of permanently attached coil springs to prevent center sag and to assure comfortable, restful sleep. A rigid foot bar prevents the mattress from slipping. Head ends are available in a wide variety of stock wood

grain and enamel finishes, or they can be color matched to harmonize with any decorative arrangement on special order. **Foster Bros. Mfg. Co., Dept. CUB, 811 Broad St., Utica, N. Y. (Key No. 822)**

What's New . . .

Drawing Table

A new drawing table especially designed for school use has recently been introduced. Known as Tolco Model TWD, the table is made of choice flat grain hard wood and is constructed to withstand maximum abuse. Features of the new table include an adjustable, hard maple laminated top built with the Tolco electronic glueing process, a cabinet with 2 by 31¼ inch compartments to provide ample storage space for individual drawing boards, and a 5 by 21½ inch drawer

for drawing materials. The new table is 39 inches high, 42 by 31 inches in top area. **The Tolerton Company, Dept. CUB, 265 Freedom Ave., Alliance, Ohio. (Key No. 823)**

Ice Flaker

The newly designed Ajax Ice Flaker machine is automatic throughout with new exterior design and many improvements within. Operational expense is cut to a minimum by the increased ice production efficiency of the new model. When the switch is turned on, the machine deposits ice flakes into a storage container within a few minutes. The unit produces approximately 1500 pounds of ice per day. The slight curve of the flakes prevents sticking and increases the cooling surfaces. **Ajax Corporation of America, Dept. CUB, Evansville, Ind. (Key No. 824)**

Portable Steel Bleachers

Cleaning up litter beneath bleachers is facilitated with the new "police-up" structural design of Sico Portable Steel Bleachers. Cross brace obstructions beneath bleacher sections is eliminated with the new feature which leaves an open tunnel the length of the bleacher row. This permits moving easily and quickly beneath the bleachers for cleaning up. The bleacher is designed for both outdoor and indoor spectator events. **Seating, Incorporated, Dept. CUB, 6045 Pillsbury Ave., Minneapolis 19, Minn. (Key No. 825)**

Crystalon Tumbler

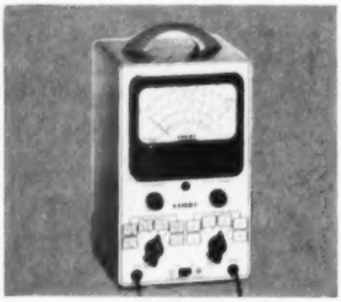
Clear plastic tumblers are now available. Known as Crystalon Tumblers they are shatterproof and do not chip. The attractive fluted design minimizes scratching so that they stay new looking longer in heavy duty service. The new tumblers conform to sanitary codes, withstand 180 degrees heat and are safe in automatic dishwashers. Replacement costs are cut since the tumblers are practically unbreakable. They are available in 10 ounce drinking tumbler size, 5 ounce fruit juice size and will also be made in 12 ounce iced tea size. **International Molded Plastics, Inc., Dept. CUB, 4387 W. 35th St., Cleveland 9, Ohio. (Key No. 826)**

(Continued on page 92)

Aluminum Fry Pans

Two new commercial aluminum cookware fry pans have been added to the Stahl line of aluminum cookware. The pans come in two sizes, 8 and 10 inches, and feature malleable steel handles for coolness. The rounded corners make them easier to clean and they have greater thickness at rim and corner for extra long wear and extra bottom thickness for even distribution of heat. **Harlow C. Stahl Co., Dept. CUB, 1375 E. Jefferson Ave., Detroit 7, Mich. (Key No. 827)**

Vacuum Tube Kit



The new Knight Vacuum Tube Volt-Ohm Milliammeter Kit has been designed for maximum versatily. It is a low cost, easy to build kit with six ranges for measuring AC peak-to-peak volts. It also includes six milliampere ranges and five capacitance ranges. The Knight VTVOM is described as an all-around instrument for use in radio, electronics and physics classrooms. Complete step-by-step instructions include schematic and pictorial diagrams to facilitate assembly and wiring. **Allied Radio Corp., Dept. CUB, 833 W. Jackson Blvd., Chicago 7. (Key No. 828)**

Compact Photo Copy Machine

The new Exact-Phote-Copy is a compact, motor driven unit for automatic photocopying. The dry processing unit copies anything typed, written, printed or drawn and is simple to operate. It is plugged into any electrical outlet and operates automatically when forms are inserted according to instructions. **General Photo Products Co., Inc., Dept. CUB, Chatham, N. J. (Key No. 829)**

Skylight Glass Block

Skytrol Glass Block was especially designed, both structurally and optically, for use in skylights. It is constructed to overcome problems of condensation, glare and heat gain and loss. A fibrous glass screen sealed in the block creates a double cavity, increasing the normally good insulating value of the glass block.

In addition to better insulating characteristics, the screen creates a block offering better daylighting control by diffusing the light. The internal prisms and Soft-Lite Edge of the block assure, with the screen, evenly diffused daylight from a panel of uniform illumination.

The construction specifications of the new Skytrol Glass Block are adaptable to all types of structures and the panels can be used in new buildings and to replace existing skylights. The panels are designed to offer superior daylighting at reasonable installation and maintenance costs. **Pittsburgh Corning Corp., Dept. CUB, 307 Fourth Ave., Pittsburgh 22, Pa. (Key No. 830)**

(Continued on page 96)

Here's the 16mm. projector you never have to oil!

Vocational students learn how to use tools much faster through sound-training films.

Only $400, complete with case and speaker for classroom and small-auditorium use.

As you can see from the comments below, Audio-Visual experts agree that the biggest single cause of projector breakdowns is *improper lubrication.* But though improper lubrication *can* be the source of costly and time-consuming damage, it can *never* be a problem with the Pageant. *For the Kodascope Pageant Sound Projector is permanently prelubricated at the factory!*

The combination of oil-impregnated bearings, sealed-in-oil bearings, "lifetime" oil-retaining pads, low-friction nylon gears, and a minimum of moving parts makes certain that you can keep classroom work right on schedule.

Have your Kodak Audio-Visual Dealer—one of a coast-to-coast group of qualified specialists in the particular motion-picture requirements of school and church—demonstrate the Pageant for you. See for yourself how easily it carries, sets up, and threads . . . how brilliantly it screens . . . how faithfully it reproduces sound. If you don't know your dealer, send the coupon below for details.

"Movie projectors that have been over- or under-oiled are our service department's biggest headaches. The Kodascope Pageant offers welcome relief. Its prelubrication feature has eliminated the major cause of breakdowns."

Richard D. Bicknell
Bicknell Photo Service
Portland, Maine

"Our repair department services all makes of 16mm. motion-picture projectors, and I can safely say that 90% of the mechanical repairs required are due to lack of proper lubrication. Certainly the permanent lubrication built into the Kodascope Pageant is a most desirable feature."

L. M. Lash, *Mgr.*
Engleman Visual Education Service
Detroit, Michigan

"Prelubrication is the 'ounce of prevention' that saves many a dollar in service charges and will keep the Pageant 'on the job' where it belongs. School and church users need and welcome this trouble-free prelubricated Pageant."

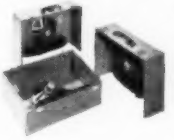
Howard P. Evans, *Pres.*
Audio-Visual Consultants, Inc.
Boise, Idaho

"There's no doubt about it —improper lubrication *is* the chief cause of sound-projector breakdowns. A large percentage of projectors that come back to our shop have been either over- or underoiled. Often this results in big repair bills, to say nothing of the time the projector is out of service. No wonder we're getting so many calls for the permanently prelubricated Pageant."

William L. Weeden
Oscar H. Hirt, Photographic Supplies
Philadelphia, Pennsylvania

Prices subject to change without notice

KODAK MULTI-SPEAKER UNIT



Has three extra speakers in matching case. Designed for use with Pageant speaker in large auditoriums and under poor acoustical conditions.
Lists at only $92.50

96

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

☐ *Send me name of nearest Kodak Audio-Visual Dealer* ☐ *Complete information on the 16mm. Kodascope Pageant Sound Projector* ☐ *Kodak Multi-Speaker Unit.*

NAME ____________________

ORGANIZATION ____________________

ADDRESS ____________________

CITY ____________________ (Zone)

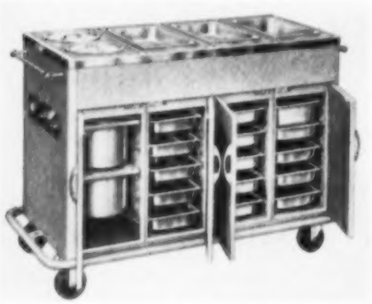
STATE ____________________

Kodak
TRADE-MARK

MOTION PICTURES . . . teach, train, entertain

What's New . . .

Portable Food Cart



A complete meal, including salad, soup, entree, vegetable and dessert, may be served from the new Naco Portable Electric Food Cart. Hot meals stay hot in the insulated "hot" compartments and cold foods stay fresh and palatable in the refrigerated compartment. The cart is loaded and then is plugged into any convenient outlet when the cart reaches the serving area, keeping the hot food hot until served. Each cart holds 18 serving pans or 18 fireless cooker pots in the hot section and six pans in the cold section.

The cart has sectional heat regulators for greater heat efficiency. It is easy to clean and can be washed or steam cleaned in a minimum of time. In transit the insulated cover is placed on top of the cart to keep food clean and hot. The cart is easily moved by one person. **National Cornice Works, Food Service Div., Dept. CUB, 1323 Channing St., Los Angeles 21, Calif. (Key No. 831)**

Mimeo-Duplicator

The Marr "Fleetwing" mimeo-duplicator prints up to 5000 sheets an hour. It is low in price and has a specially designed two-speed portable drive unit. It runs a wide variety of stock from 3 by 5 to 9 by 16 inches and has automatic, positive, single sheet continuous load-feed. The Fleetwing features a new inking system and an automatic counter, and is available for electric or manual operation. **Marr Duplicator Co., Inc., Dept. CUB, 53 Park Place, New York 7. (Key No. 832)**

Folding Tablet Arm Chair

The new Norcor No. 362 Folding Tablet Arm Chair is designed for emergency classroom use, for conferences or lectures, and for other occasions where a tablet arm chair is temporarily required. It is designed so that it has a minimum of joints, links or hinges to create trouble and has a clean, functional appearance. The Y-type chair is made of strong tubular steel with a comfortable, oversized, form-fitting plywood seat and deeply curved steel backrest. The tablet arm is made from ⅜ inch resin-bonded plywood and is so attached that it folds automatically against the chair as the seat is raised. The folded chair is compact and easily stacked for storage.

The chair is self-leveling and is so designed that it does not collapse. The radially welded tubular steel stretchers give added strength to prevent racking or twisting even under severe strains.

The chair has a taupe finish with wood parts in either natural or walnut finish. **Norcor Mfg. Co., Dept. CUB, Green Bay, Wis. (Key No. 833)**

(Continued on page 100)

What's New . . .

Rotary Snow Plow

The improved Sno-Master is a powerful rotary screw type snow ploy which is easy to operate and facilitates the removal of large quantities of snow. The chain equipped wheels are power driven, thus giving the machine the traction necessary to remove up to two feet of snow with minimum effort on the part of the operator. The rotating screw forces snow into revolving steel blades which throw it to the side. The deflector is adjustable to right or left and to control distribu-

tion as the force is sufficient to throw the snow 25 feet.

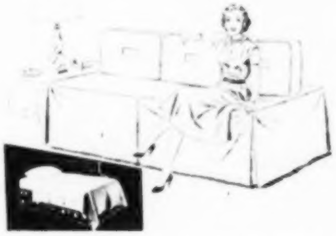
Operating mechanism in the Sno-Master is protected against snow damage and the machine is engineered for many years of efficient service with minimum maintenance. **The Bready Tractor and Implement Co., Dept. CUB, 212 Aurora Road, Solon, Ohio. (Key No. 834)**

Decontaminating Agent

Enley CP Cleaner has been especially developed as a surface decontaminating agent against radioactive substances. It is equally effective as a general cleaning agent as it dissolves, emulsifies and disperses particles of dirt, oil, grease and stains, leaving no film or scum. It can also be used for cleaning the skin. **Enley Products Inc., Dept. CUB, 254 Pearl St., New York 7. (Key No. 835)**

Swing-Bac Divan

Designed for use in dual-purpose rooms, the Harvard Swing-Bac Divan serves as a comfortable divan during the day and is easily converted for comfortable sleeping. The Bac-Rest swings back with no effort to provide a full 39 inch sleeping surface. When the Bac-Rest is in position, the cushions are supported at the correct depth for comfortable sitting. The all-metal frame is finished in wheat-colored enamel, the legs are completely recessed, and the smooth-rolling casters and easy turning glides make the divan easily moved. It is suitable for dormitory and other housing, especially where



rooms are used by meeting, study or social groups. **Harvard Manufacturing Co., Dept. CUB, 6201 Woodlawn Ave., Cleveland 4, Ohio. (Key No. 836)**

Coffee Stain Remover

The flavor of coffee is improved when coffee makers and servers are cleaned with Coffee Stain Remover. This odorless, economical, easy to use compound removes residual coffee oils and stains that seem impervious to ordinary cleaning. Coffee stains can also be removed from plastic and other dinner ware and from linens by using the Maid-Easy Remover. **Maid-Easy Cleansing Products Corp., Dept. CUB, 25 Elm Ave., Mt. Vernon, N. Y. (Key No. 837)**

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April, 1953

Please ask the manufacturers, indicated by the numbers I have circled, to send further literature and information provided there is no charge or obligation.

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What's New . . .

Product Literature

• Nabisco Products are illustrated with information on packaging, in a booklet, **"Around the Clock With Nabisco,"** issued by National Biscuit Co., 449 W. 14th St., New York 14. A simplified chart lists Nabisco products, and times for their use and ways for using them are shown in attractive photographs. **(Key No. 838)**

• **List No. 38** of **Eastman Organic Chemicals** is a completely revised edition of the catalog and includes a new section on the nomenclature of organic chemicals. Providing detailed information on the more than 3500 organic chemicals supplied by the company, the catalog includes some 256 new chemicals added since publication of the last edition. The booklet is available from Distillation Products Industries, division of the Eastman Kodak Co., Rochester 3, N. Y. **(Key No. 839)**

• A gate fold page in the center of the new **Kewanee-Iron Fireman Catalog** illustrates the operation of the new **Boiler-Burner Unit** in full color. Cut-out sections in the illustration show the internal workings of the unit and each point is carefully discussed. Full data on ratings and dimensions are given on the other side of the enlarged page. The full line of Kewanee-Iron Fireman Boiler-Burner Units is described and illustrated in the full color catalog to aid in selection of the proper unit for any application. The catalog is available from Iron Fireman Mfg. Co., 3170 W. 106th St., Cleveland 11, Ohio, or Kewanee-Ross Corp., Kewanee, Ill. **(Key No. 840)**

• Illustrations of maps printed in full color are featured in a new folder on **Magna-Graphic Large Maps of the World and the United States** issued by Weber Costello Co., Chicago Heights, Ill. Detailed information on the maps and on Magna-Graphic map projection is given in the folder. **(Key No. 841)**

• The new **Turkey Handbook** is now available in a revised edition. The 68 page booklet tells the story of the turkey, the "All-American bird," its use in institutions, including colleges, quality designation, meaning of turkey labels, information on processed turkey, turkey portion costs, yields from various sizes of turkeys, how to prepare turkeys and turkey recipes. The section on colleges, includes a report on the use of turkeys, with charts on the results of studies at actual colleges. The booklet is illustrated in black and white and in full color. One copy will be mailed free on request to National Turkey Federation, Dept. MH, Mount Morris, Ill. Additional copies are available at 35 cents each. **(Key No. 842)**

• Prizes will be awarded to winners in a unique **contest** being conducted by The American Floor Surfacing Machine Co., 518 S. St. Clair St., Toledo 3, Ohio, as part of its fiftieth anniversary activities. A pioneer manufacturer of floor sanders, the company is awarding prizes for the oldest American Machines in regular use the longest time. Entries should be made by a letter giving data on when the machine was purchased, serial number, background of owner, number of years he has used the machine, jobs it has been used on and similar information. **(Key No. 843)**

• The complete line of APSCO products now available is featured in a new file size **General Catalog** issued by Automatic Pencil Sharpener Co., 336 N. Foothill Rd., Beverly Hills, Calif. The catalog is loose-leaf in type so that pages on new products or models may be easily added. Its handy file folder size and make up permits quick recognition when filed. Detailed information on each of the APSCO Pencil Sharpeners as well as the Swedish Staplers and the envelope opener is included in the catalog. **(Key No. 844)**

• The new **1953 Athletic Equipment Catalog** is now available from W. J. Voit Rubber Corp., 1600 E. 25th St., Los Angeles 11, Calif. The new 32 page booklet includes all of the 97 Voit rubber and rubber-covered items of inflated balls and related equipment for year around sports. New and improved Voit items are included. **(Key No. 845)**

• **"Care, Adjustment and Maintenance of Your Russwin Builders' Hardware"** is the title of a 48 page booklet B-1 issued by The Russell & Erwin Division of the American Hardware Corp., New Britain, Conn. The booklet has been prepared for the purpose of answering some of the questions that arise in connection with the servicing and adjustment of Russwin builders' hardware. Each point discussed is carefully illustrated by parts and operation and the booklet should serve as a helpful maintenance manual. **(Key No. 846)**

• The expanded line of **Series 23 gas fired unit heaters** is described in a new four page technical bulletin recently released by the United States Air Conditioning Corp., 3300 Como Ave., S. E., Minneapolis 14, Minn. Bulletin 23-2, gives special design features of the usAIRco heaters. **(Key No. 847)**

• Telling the story of **"Seaporclad,"** the new porcelain enamel curtain wall material, an 8 page, two color bulletin has been isued by Seaporcel Metals, Inc., 28-20 Borden Ave., Long Island City 1, N. Y. Full details on this new light weight structural material are given in the bulletin. **(Key No. 848)**

•Features of the WD-23 and WD-15 wet-dry vacuum cleaners available from the Clarke Sanding Machine Co., Muskegon, Mich., are discussed in a new folder recently released. Complete specifications on the two machines are given in **Form No. 521** entitled **"Suctioneered by Clarke for your cleaning chores . . . and to save you money."** The long list of available attachments which make the vacuums all-around cleaning instruments are also described and illustrated. **(Key No. 849)**

• A 24 page booklet, **"Electronics for Audio-Radio-Television,"** has been released by David Bogen Co., Inc., 29 Ninth Ave., New York 15. The full line of amplifiers, phonographs, public address systems, AM-FM tuners and accessories is described and illustrated with specifications and prices. **(Key No. 850)**

• The results of a survey on **"Window Covering Costs and Upkeep"** based on a typical 4 by 5 foot window are now available in a folder released by Vertical Blinds Corp. of America, 1936 Pontius Ave., West Los Angeles 25, Calif. The survey answers questions regarding the use of average window coverings including purchase costs, cleaning costs, cleaning time and upkeep of various types of window coverings. **(Key No. 851)**

Suppliers' News

Multi-Clean Products, Inc., 2277 Ford Pkwy., St. Paul 1, Minn., manufacturer of floor maintenance equipment, announces purchase of the manufacturing facilities of the **Industrial Vacuum Cleaner Department** of the **General Electric Company.** A new factory is under construction in St. Paul, Minn. where the industrial line of vacuum cleaners will be produced.

The following manufacturers have announced **changes in address:**

De Vry Corporation, 1111 W. Armitage Ave., Chicago 14, manufacturer of audio-visual equipment, removal of its eastern sales and service branch to its own specially designed building at **29-04 37th Ave., Long Island City 1, N. Y.**

Arthur L. Peirson & Co., manufacturer of food products, from **189 Chrystie St., New York 2,** to **South End Blvd. and Montrose, Vineland, N. J.**

Refrigerated Equipment Sales Corp., manufacturer and distributor of refrigerators and similar equipment, from **19 W. 44th St., New York 18,** to **80 W. Broad St., Mount Vernon, N. Y.**

Vogel-Peterson Co., Inc., manufacturer of wardrobe equipment, from **624 S. Michigan Ave., Chicago 5,** to **1127 W. 37th St., Chicago 9.**

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for College Buildings

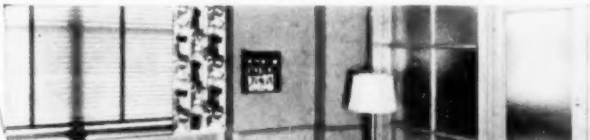
Across the nation, modern college buildings, large and small, are equipped with Johnson Automatic Temperature Control to provide student and faculty comfort coupled with the lowest possible operating cost.

Cornell University's Statler Hall is another example of the adaptability of Johnson equipment. This building is heated by convectors, 105 of which are under the control of Johnson single-temperature or *Dual* Room Thermostats. Five central fan ventilating systems, under Johnson behind-the-scenes Master-Submaster control, serve those areas requiring ventilation. The balance of the direct radiation is under the control of Johnson-pioneered, weather-compensated "*Duo-Stat*" Zone Control.

Johnson, pioneering in the field of automatic temperature regulation, brings to each job years of experience and know-how in solving temperature control problems of every type. A Johnson System of automatic temperature control quickly pays for itself in added comfort as well as in lower maintenance costs and fuel economy.

Perhaps your buildings present temperature control problems as varied as those in Statler Hall. But, regardless of the type of problem, consult a Johnson engineer from a nearby branch office. Let him explain the money-saving features of a Johnson-engineered Control System. JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.

Statler Hall, Cornell University, Ithaca, N.Y. Holabird, Root & Burgee, architects, Chicago; Quackenbush Company, heating contractors, Buffalo.



In the student lounges, bedrooms and other areas not provided with "individual room" control, temperature comfort is provided by a Johnson "Duo-Stat" (shown with cover removed from cabinet) for each of three heating zones. These instruments measure outdoor temperatures and vary the heat supply to compensate for changes in outdoor temperatures.

Johnson T-400 Room Thermostats operate valves on 105 convectors in public spaces such as the dining room.

T-460 Dual Room Thermostat | V-160 Convector Valve | V-103 Steam Valve

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